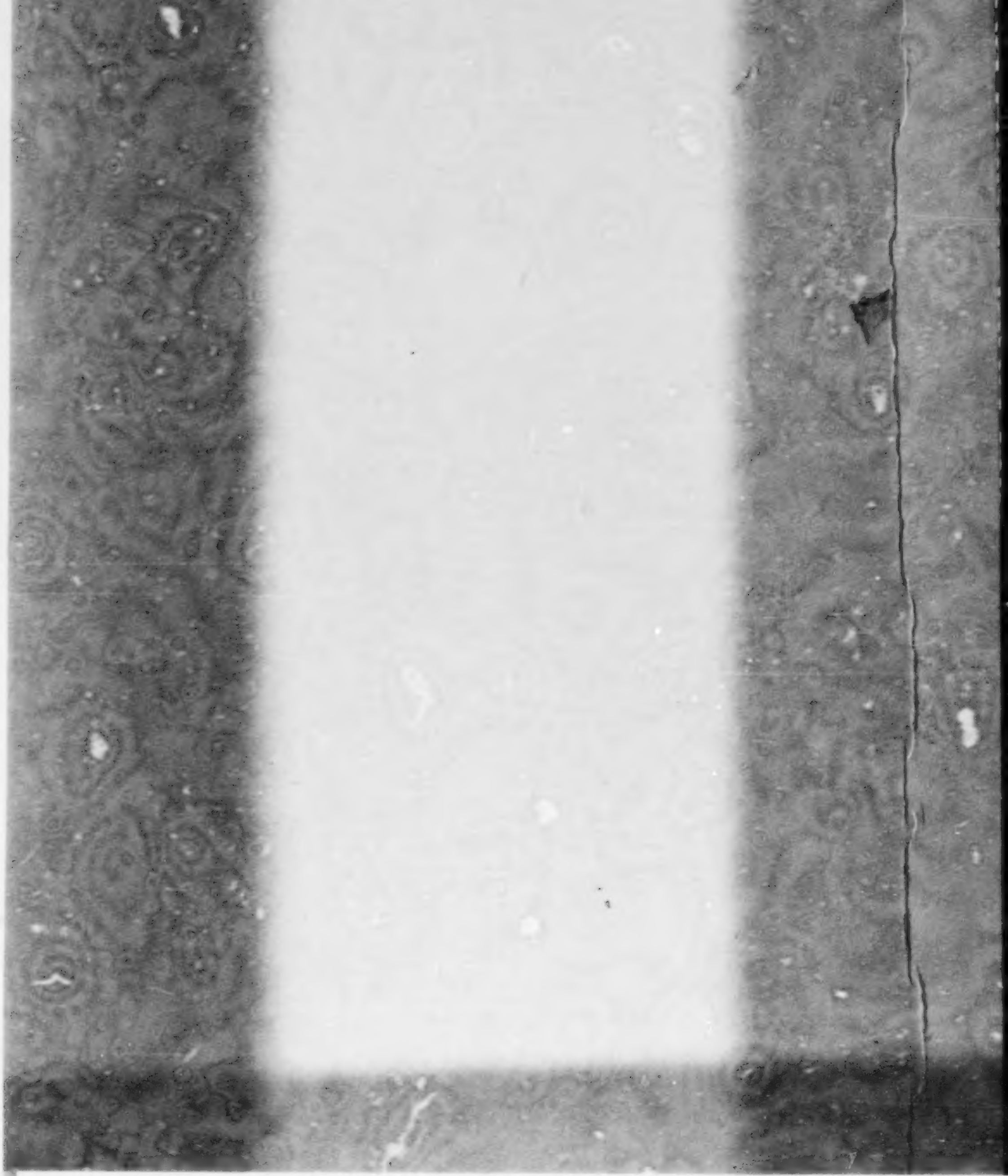

688

Forest and Rangeland Birds of the United States

Natural History and Habitat Use

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Forest and Rangeland Birds of the United States

Natural History and Habitat Use

Richard M. DeGraaf
Northeastern Forest Experiment Station
USDA Forest Service
Amherst, Massachusetts

Virgil E. Scott
Denver Wildlife Research Center
USDI Fish and Wildlife Service
Fort Collins, Colorado

R.H. Hamre
Rocky Mountain Forest and Range Experiment Station
USDA Forest Service
Fort Collins, Colorado

Liz Ernst
Denver Wildlife Research Center
USDI Fish and Wildlife Service
Fort Collins, Colorado

Stanley H. Anderson
Wyoming Cooperative Wildlife Research Unit
University of Wyoming
Laramie, Wyoming

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Cover photo: Cedar Waxwings in nest. © R. Reinhold

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Using This Book

This book is designed to provide managers with information on the assemblage of bird species that might be expected in forest and rangeland habitats.

In the first section, natural histories are provided for each bird species, including taxonomic information, range and status, habitat descriptions, nest site descriptions, and food habits. These natural histories thus provide a short review of the pertinent information on each species necessary for initial evaluation of management practices for a particular area. The illustrations in the publication are reproduced from BIRDS OF NORTH AMERICA by Robbins et al., illustrated by Arthur Singer, © 1983, 1966 Western Publishing Company, Inc., and are used by permission. Nomenclature, distribution, and taxonomic order follow the American Ornithologists' Union (1983).

After the natural history information, a series of matrices list bird species that either breed or winter in 20 forest cover types and 24 rangeland, desert, and other nonforest habitats.

The authors believe this guide can provide a basic source of data to assist land managers in ecologically sound management of resources.

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INTRODUCTION

As North America was settled, many once-abundant birds began to disappear. Some were hunted, but habitat loss or alteration was responsible for most losses. Around the turn of the twentieth century, conservationists began efforts to preserve habitats so that birds, especially plumed wading birds, could survive. Legislation was initiated to assist in the conservation of birds and to manage hunted species. Today, many public and private conservation agencies are involved in managing bird populations and their habitats.

Birds are important components of ecosystems. Birds disseminate seeds and prey upon innumerable insect and vertebrate pests. They are involved in energy transfer as they eat and are eaten. Nutrients are also distributed through the movement of birds. Vultures, crows, ravens, and other scavenging birds are important in natural decomposition cycles. Because birds are not isolated components of our natural systems but integral parts of them, it is vital to understand both their roles and their needs.

Management of birds—whether for human enjoyment, consumptive use, or ecological considerations—requires data on their biology and habitat use, as well as an understanding of community interactions. Wildlife biologists, foresters, rangeland managers, and land-use planners use comprehensive information on the total community—including birds—in habitat management. Information must be available on the species present in the area, their habitat requirements, and how birds will respond to habitat alterations.

The objective of this book is to summarize information on the natural histories and habitat needs of forest and rangeland birds to help managers evaluate the impacts of various actions in different vegetation types. Opportunities can be identified to emphasize birds in management actions and to minimize negative impacts. These data, however, cannot replace the need for on-the-ground evaluations when projects are planned that will alter avian habitats; the natural history and matrix information compiled here must be applied along with local field knowledge.

Distribution of Birds in the United States

There are several broad patterns in the ecological distribution of breeding birds in the United States. There is a generally increasing continuum of breeding bird species from the drier areas of the Southwest and West to the more moist forests of the Northeast (Peterson 1975). Regions dominated by desert vegetation have relatively simple avifaunas that contain a few prominent species. Regions with complex mixed forests contain many rather evenly distributed species, although much regional variation occurs along this gradient. In the Great Plains, the number of species increases from Texas to the Canadian border (Cook 1969, Peterson 1975). This latitudinal increase may reflect patterns of glaciation or a more heterogeneous landscape on the northern plains, but in general the avian community in grasslands is organized by the most obvious structural feature, grass height (Cody 1968).

Mountainous regions of the United States have relatively diverse avifaunas, largely because their considerable topographic relief compresses several different vegetation zones into a relatively small area, rendering them ecologically diverse (Cook 1969). Closely related habitats, or habitats with similar physical profiles or complexities, exhibit similar bird diversities (Peterson 1975).

Importance of Vegetation Structure

An avian community, as defined here, is an aggregate of species existing together in a definable ecological area that provides the species' requirements. Each species can exist only where its specific requirements are met. Within the general habitat provisions of food, water, and shelter, birds have various specific needs for nest sites, song posts, perch sites, and vegetation structure. Some species have relatively narrow ranges of tolerance for specific factors. A prime example is the Kirtland's warbler, which breeds only in fire-regenerated stands of young jack pine in Michigan's Lower Peninsula. Others, such as the American robin, which breeds throughout North America, have broad ranges of tolerance and so are widely distributed.

Many components of the environment, including vegetation structure, plant species composition, succession, and vegetation layering, affect the distribution of bird species. What is not so obvious is that there are two basic sets of factors, ultimate and proximate, that determine whether a bird can reproduce in a given area. Many of the factors that actually determine reproductive success are not evident at the time the bird arrives or selects its breeding habitat. Keys to these ultimate factors, such as food availability for nestlings, are perceived in advance through proximate factors—aspects of the physical habitat, especially vegetation structure.

Ever since Lack (1933) suggested that birds select breeding habitats by recognizing features they did not immediately require for survival, many studies have been conducted to identify the features or patterns of vegetation structure that bird species were "programmed" to seek. Beecher (1942) expressed a similar idea, and suggested that a bird did not "adapt" to a so-called new habitat but rather chose the habitat because of its programmed ability to recognize potentially satisfactory ultimate factors.

MacArthur and MacArthur (1961) demonstrated that the vertical complexity of forest vegetation (the diversity of vegetation heights and density of foliage at those heights) affects breeding bird diversity. The relationship of bird species diversity to foliage height diversity has been demonstrated in many forest habitat types (Karr 1968, Karr and Roth 1971, Willson 1974). Foliage height diversity may be an indicator of total foliage volume. The important consideration for managers, however, is that habitat alteration changes the number of bird species and their relative abundances, both of which affect diversity.

Studies of habitat selection and resource partitioning by breeding birds include measurement of many descriptors of stand structure. These stand measurements – canopy height, layering and closure, tree diameter and species composition, understory height and volume, ground cover, etc.—are attempts to identify the proximate factors that birds select when settling on the breeding grounds.

Horizontal diversity or patchiness (the distribution of successional stages, timber size classes, and openings) is also important to breeding bird composition. Roth (1976) demonstrated that the number of bird species increased faster than the degree of species overlap in a series of habitats from grasslands to forests, and that horizontal habitat patchiness was a better predictor of the numbers of bird species than was vertical habitat complexity.

Both the vertical diversity or structure of forest stands and the distribution of stands of different size class or type are typically manipulated in forest management and can be altered as needed to manage the type and availability of bird habitat.

The close relationship between habitat structure and bird species composition is useful for assessing the effects of forest management on breeding birds. For example, as stands of northern hardwoods (sugar maple, American beech, yellow birch) develop after clearcutting, each tree size-class—regeneration, seedlings/saplings, poles, and sawtimber—supports a different breeding bird species composition (DeGraaf 1987). In the Willamette Valley, birds respond to successional patterns as Oregon white oak is replaced by Douglas-fir and finally by true fir and western hemlock. Downy woodpeckers, black-capped chickadees, and white-breasted nuthatches breed in the oaks, while chestnut-backed chickadees, red-breasted nuthatches, and golden-crowned kinglets commonly breed in Douglas-fir stands (Anderson 1970).

Long-term changes in bird populations occur in response to environmental change. As land uses change, or as succession proceeds, bird communities and populations will change. Most habitat management projects are, in effect, attempts to control succession: either setting it back to an earlier stage, arresting it, or allowing it to advance to a desired stage. This process can also be accompanied by short-term changes in which individuals adapt to changing conditions. Outbreaks of some insects, for example, might attract birds to a forest where they normally do not feed, such as the woodpeckers that congregate in areas of mountain pine beetle infestation.

Forest and Rangeland Management

Most forest management activities are not directed primarily at wildlife, but proper planning can help maintain or enhance wildlife habitats while accomplishing other goals. In logging or thinning operations, successional patterns are changed, creating habitat for different species of birds. Clearcutting reduces nesting, shelter, and feeding habitat for forest canopy birds, but the habitats of ground and shrub dwellers will be enhanced. Small rodents will increase in clearcuts and provide a food base for raptors. As the forest regenerates, woodland hawks and owls replace open-country hawks and falcons. Forest canopy birds will replace the ground dwellers.

Even-aged forest management creates forest stands of uniform age or size classes. The forest will have a variety of openings and stands, each with a fairly homogeneous structure, especially in smaller size classes. Thus, over the entire forest, a variety of bird habitats exists.

Uneven-aged forest management produces trees of markedly different ages or sizes in the same stand. Thus, each stand in the forest has a fairly diverse structure, but all stands are fairly similar. The result can be a more diverse bird community in each stand than in any one stand under even-aged management, but it is often less diverse than that in an entire forest under even-aged management, where many successional stages are represented. A northern hardwood forest under even-aged management, for example, supports approximately twice as many breeding bird species as does an extensive uneven-aged forest. The lack of distinct, early successional stages in the uneven-aged northern hardwood forest means that species associated with those habitats—willow flycatchers, cedar waxwings, eastern bluebirds, chestnut-sided and mourning warblers, among others—will not likely be present (DeGraaf 1987).

Deciduous Forests

A striking feature of the bird communities of deciduous forests is the high proportion—up to 75%—of migratory species. Thus the total bird population (the standing crop) is very high in the summer breeding season. Bird communities in coniferous forests are seasonally less variable. In the deciduous forest there is a general pattern of increasing bird density with plant succession (see Shugart et al. 1975 for examples). The general pattern of avian succession is generally acknowledged to be a manifestation of the habitat preferences and ecological requirements of forest birds.

In northern hardwood types, as with other hardwood types, the composition of bird species varies with timber size class, the presence or absence of softwoods in the stand, stand area, the presence of cavity trees, openings, and other within-stand features. In New England, even-aged sawlog stands have avifaunas very similar to those in uneven-aged stands because the diameter distributions in both are similar; there are essentially no differences in foliage profiles in stands more than 30 years old (Leak 1979, Aber 1979). Thus the breeding bird assemblages in stands beyond the pole stage are similar. On wetter sites, where red spruce comes into mature stands, the softwood component provides habitat for species—especially warblers—that are typically associated with coniferous types.

Oak-pine and oak-hickory types, which together compose most of the inland forests of the United States, support 150 to 200 species of breeding birds. Many are associated with successional stages and wetland and open habitats within these broad types, but their avifaunas are nevertheless quite rich. In oak-hickory types, site quality determines the dominants in mature stands: red, white, and black oak on good sites, post oak and blackjack oak on poor sites, and white and post oak on intermediate sites. Succession in oak-pine and oak-hickory types is similar, except that pine seedlings come in after disturbance during the "brush" stage in oak-pine.

Old-field successional stages are different from those after clearcutting, especially in the oak-pine type. Old fields produce essentially pure pine stands that persist a long time before oak components appear. After clearcutting, however, all components of the oak-pine types are present throughout stand development (Evans 1978).

Oak-hickory and oak-pine forests, largely due to these differences in their successional patterns, support somewhat different avifaunas. Many species associated with coniferous forests are found in the oak-pine type (see Evans 1978 for review). The larger difference between the two types is the greater value of oak-pine forests to wintering birds because the type is more southern than oak-hickory, and conifers provide additional cover.

In the western United States, aspen stands provide especially rich bird habitats compared to coniferous types. Moist ground surface, high insect populations in the understory, edge effect, and nest hole availability (depending upon woodpecker use and *Fomes* infection) have been identified as factors primarily responsible for the rich avifaunas in these stands (Winternitz 1976).

In both the desert Southwest and the Great Plains, riparian woodlands are essentially deciduous; cottonwoods are important in both regions, although Great Plains riparian woodlands contain more tree species as one moves eastward. These habitats contain bird communities that are as much as seven times as rich as those in the surrounding Plains habitats in general (Tubbs 1980).

In the Southwest, a variety of riparian habitats, each with a more or less unique assemblage of breeding bird species, is extremely important for wintering and migrant species also. Bird density is directly correlated with densities of cottonwoods in these wooded southwestern-riparian zones (Carothers and Johnson 1975).

Coniferous Forests

Approximately 150 bird species are associated with coniferous forests across the United States; the greatest number of species is found in mature forests in the Northeast, and the lowest in young stands in the same region. In other regions of the United States, the number of species is both lower and fairly uniform (Wiens 1975). A general pattern in coniferous forest avifaunas is that they are characterized by a few abundant species. Approximately a quarter of the individuals are of a single dominant species, and one-third to one-half belong to the two most abundant species.

The degree of dominance by a few species decreases with species richness. Several dominant species that occur throughout coniferous forests in the United States include: northern flicker, red-breasted nuthatch, brown creeper, American robin, hermit thrush, golden-crowned kinglet, dark-eyed junco, and chipping sparrow. These species occur in all coniferous regions, and can be considered the group most representative of this vegetation type across the United States (Wiens 1975).

Analyses of the ecological structure of coniferous forest avifaunas—e.g., those of Balda (1969), MacArthur (1958), and Sturman (1968a, 1968b)—have revealed several patterns of habitat utilization. Foliage-gleaning species are the most abundant birds in all North American coniferous forests, while ground-gleaners, bark-gleaners, and aerial feeders are less abundant in decreasing order.

Foliage feeders constitute the greatest proportion in mature northeastern and southeastern coniferous forests. All ground-gleaners are most important in early successional stands, and bark-gleaners and aerial feeders are proportionately more numerous in western coniferous forests.

Among foliage feeders, insectivores predominate in all forest types. Warblers constitute the major component of the breeding avifaunas of the northeastern and southeastern coniferous forests, but their relative densities are lower in the western forests. Both the number of warbler species and their densities are substantially lower in western forests than in eastern North America, and their paucity is not compensated by other foliage-gleaning insectivores. These differences likely reflect differences in prey availability between eastern and western North America (Wiens 1975).

In the longleaf-slash pine forests of the Southeastern and Gulf Coastal Plains, bird species richness can be maintained by retaining dead trees, avoiding extensive monocultures, and controlling—rather than eradicating—understory vegetation (Wood and Niles 1978).

Loblolly-shortleaf pine, a subclimax or developmental stage of oak-hickory, occurs on the Southeastern Coastal Plain and Piedmont—the old Cotton Belt. The red-cockaded woodpecker, the only endangered species closely associated with upland loblolly-shortleaf pine, occurs in clans of 2 to 10 birds in stands at least 80 years old and 35 to 160 acres in size (Meyers and Johnson 1978).

As the loblolly-shortleaf type develops, four stages each have distinct breeding bird assemblages: grassland, shrubland, pine forest, and hardwood forest (Johnston and Odum 1956). Maintaining stands in earlier stages by shorter rotation (about 35 years) is eliminating mature pine and hardwoods. Short rotations eliminate cavity trees, understory vegetation, fruits and mast, and deciduous trees. Many bird species winter in this type. Because species richness declines from early successional stands and begins to increase at about age 35, short rotations adversely affect both breeding and wintering birds (Dickson and Segelquist 1978, Noble and Hamilton 1976, Quay 1947).

The ponderosa pine type, which has the widest distribution of any pine type in North America (Little 1971), occurs in extensive stands in northern California, eastern Oregon, and the intermountain region, and as scattered islands in the Southwest and Rocky Mountains. Because stands range from savannas to mixed pine-broadleaf transition forest to pure ponderosa pine and mixed conifer stands, the type has a wide array of bird species associated with it (Diem and Zeveloff 1980). Where ponderosa pine is an important commercial tree, maintenance of snags and cull trees is important for cavity-nesting birds; a higher proportion of the avifauna is composed of cavity-nesting species in western than in eastern forests.

Where the ponderosa pine type grades into the pinyon-juniper type in the Southwest, the ecotone between the two types contains fewer bird species than does either community alone. In the pinyon-juniper type, the number of breeding species that nest in holes or forage on trunks and branches is directly related to the density of pinyon pines. In winter, bird species richness and density are strongly related to juniper berry production (Balda and Masters 1980).

The Douglas-fir region west of the Cascade Range is intensively managed because timber values are high, especially in old stands. Under natural succession, grass and shrub stages are followed by Douglas-fir, which forms dense, even-aged stands that persist for centuries. Mortality eventually opens the stand, and true climax western hemlock and western redcedar invade and an understory is reestablished. After four to six centuries without disturbance, climax western hemlock replaces Douglas-fir (Franklin and Dyrness 1973).

In intensively managed forests, fire is commonly used for slash removal and seed-bed preparation after harvest cutting. Genetically superior seeds or seedlings are planted, and herbicides, fertilizers, and pest control practices quickly produce even-aged stands of fast-growing Douglas-fir. These trees are harvested at 50 to 150 years of age. This managed succession—shortening the grass-forb and shrub stages and eliminating snags and old-growth forest—directly affects the avifaunal composition. The second (shrub) successional stage, in which approximately 40 percent of the bird species associated with the type nest, is abbreviated.

Fire affects birds indirectly by modifying their habitats. Removal of woody vegetation creates clearings with low vegetation that favors some birds. Along the border between Arizona and Mexico, for example, open-country birds such as American kestrel, roadrunner, curved-billed thrasher, harlequin quail, and chipping sparrow are most common on the Mexican side where fire control is less stringent. The species most common in Arizona are birds of brushland or dense forest, including the blue-gray gnatcatcher, black-throated gray warbler, Scott's oriole, and rufous-sided towhee (Marshall 1963).

Some species are attracted to new burns, including robins, bluebirds, several sparrows, flickers, several woodpeckers, mourning doves, and pine warblers. Prescribed fire has long been used to produce habitat for bobwhite quail in yellow pine in the Southeast (Stoddard 1963). Breeding-bird density and diversity are slightly higher in burned than in unburned chaparral (Laurence 1966). In lodgepole pine and spruce-fir forests in Yellowstone National Park, numbers of bird species increased for 25 years after fire, then begin to decrease (Taylor 1973).

In the moist, temperate coniferous forests of the Olympic Mountains, large lightning fires are less common than in Wyoming, but a similar avian response occurs over time: more species are unique to the first 20 years after fire than to stages 100 to 300 years later. Habitat for ground- or shrub-foraging species is generally enhanced in the first few years after fire, while habitat for mature-forest birds is decreased. However, during the first 1 to 3 years after fire, the bird community in coniferous forests may be more similar to that in mature forests than to the ground/shrub community (Huff et al. 1984, Bock and Lynch 1970, Bock et al. 1978), with the greatest post-fire changes in the composition of bird species occurring after about 20 years in the western United States.

Kirtland's warbler depends completely on periodic fire to maintain a very specific nesting habitat in young stands of jack pine in Michigan's Lower Peninsula. For detailed information on the effects of fire on bird habitat, see the compilations of Lotan and Brown (1984), Wood (1981), and Wright and Bailey (1982).

Management of cavity trees has become standard silvicultural practice for bird habitat management, but continued availability of contiguous old growth for the northern spotted owl remains a real concern. A detailed review of Douglas-fir management and bird species composition is provided in Meslow and Wright (1975).

Rangeland Habitats

Rangeland avifaunas characteristically have few breeding bird species compared to forests. Approximately 40 species (excluding waterfowl, raptors, and galliforms) occur with moderate frequency across major rangelands of the United States, from the shrub steppes of the Great Basin to the shortgrass, tallgrass, and mixed-grass prairies of the Great Plains (Wiens 1973, 1974). A rather small group of species characterizes each rangeland type; sparrows are present in moderate to high numbers in all rangeland habitats. There is substantial seasonal and annual variation in total bird density but not in the species composition of breeding birds. Rangeland avifaunas are often dominated by one or a few species, and high dominance is associated with low numbers of breeding species (Wiens and Dyer 1975).

Grazing and grain production are the dominant uses of rangelands. Grazing affects breeding avifaunas in various ways depending upon the intensity and rangeland type. In general, however, where grazing regimes affect vegetative composition only slightly, effects on avifaunal composition are slight. Where intensive grazing produces marked changes in vegetative composition, avifaunal composition changes markedly, usually toward that characteristic of more xeric habitats (Owens and Myres 1973, Wiens 1973). Fencing to control grazing intensity, timing, and location may create a mosaic of range conditions and therefore of bird communities of differing structure and composition.

Type conversion to remove woody vegetation and increase forage production—whether by herbicide, mechanical means, or fire—can be beneficial or detrimental to avian habitats depending upon extent, pattern, successional stages involved, and effects on special habitat needs of certain species. An example of a detrimental effect is the removal of Ashe juniper on the Edwards Plateau of Texas, which is required for nesting by the golden-cheeked warbler, a threatened species. A beneficial effect in fire-treated chaparral is increased species richness, especially where brush "islands" are retained (Bell and Studinski 1972).

The history of western livestock grazing and big game populations and their habitats have been described in detail by Wagner (1978). Generally, bison, bighorn sheep, and cattle feed more heavily on grasses; mule deer and mountain goats on shrubs and trees; and pronghorn and domestic sheep generally feed on forbs. Elk and horse feeding habitats overlap those of all of these other herbivores. Foraging by rodents, rabbits, and hares can profoundly affect rangeland vegetation, especially in desert rangelands (Norris 1950, Rice and Westoby 1978).

The preponderance of evidence indicates that grazing is generally harmful to waterfowl habitat and nesting success (Brown and Johnston 1978, Weller et al. 1958). In the Southwest, heavy grazing has also caused serious declines in populations of lesser prairie-chickens (Brown 1978), greater prairie-chickens, Montezuma quail, California quail (Leopold 1977), and northern bobwhite (Phillips et al. 1964). Intensive grazing is considered the primary factor in the decline of the Columbian sharp-tailed grouse (Miller and Graul 1980). Attwater's prairie-chicken uses grazed pastures more than ungrazed pastures because green herbaceous vegetation is made available by grazing (Kessler and Dodd 1978). In North Dakota, American bitterns, marsh hawks, and short-eared owls nest only in tall, dense ungrazed grasses and legumes (Duebbert and Lokemoen 1977).

The effects of grazing on avian habitats vary from place to place. In areas of higher precipitation, grazing may provide more habitat patchiness and so be generally beneficial to birds. In areas of low precipitation, protection from grazing may be necessary for a species that benefitted from grazing in an area of higher precipitation. Effects of soil, slope, and exposure, as well as amount and seasonal distribution of precipitation may be more important than grazing in affecting the quality of bird habitat (Ryder 1980).

Fire is an important tool in maintaining grasslands. Where fires are suppressed, grasslands may be replaced in successional stages by shrub-dominated communities, thereby providing habitat for different species of birds. For example, control of fire in the upper Midwest has reduced that habitat for sharp-tailed grouse.

Prescribed fire maintains proper cover conditions for both prairie chickens and sharp-tailed grouse in tallgrass prairie and promotes the growth of preferred subclimax foods (Miller 1963).

Creating isolated stands of trees and shrubs often enhances habitat for grassland birds. Thus riparian habitats and shelterbelts receive disproportionate use by birds. These habitats not only have their own bird communities, but are also used by grassland-nesting species as well. Cavity nesters also use riparian habitats extensively. Primary cavity users, those birds that excavate their own nesting and roost cavities, and secondary cavity nesters, which use cavities already present, are common in riparian habitats near grasslands.

Fencerows also provide shelter and nest sites for grassland birds and add to the year-round diversity of bird communities.

Little of the Northern Plains is forested, and shelterbelts have attracted bird species that not otherwise occur there. Mature shelterbelts resemble a late successional stage of the lowland hardwood forest in the north-central states. Perches for singing and hawking birds are available above the surrounding cropland or grassland. Foliage gleaners utilize the leaves of trees and shrubs. Raptors and hole-nesters are common in old shelterbelts. None of these microhabitats exist without woody vegetation. Now, with the advent of center-pivot irrigation and large grain drills and harvesters, many shelterbelts are being removed.

Acknowledgments

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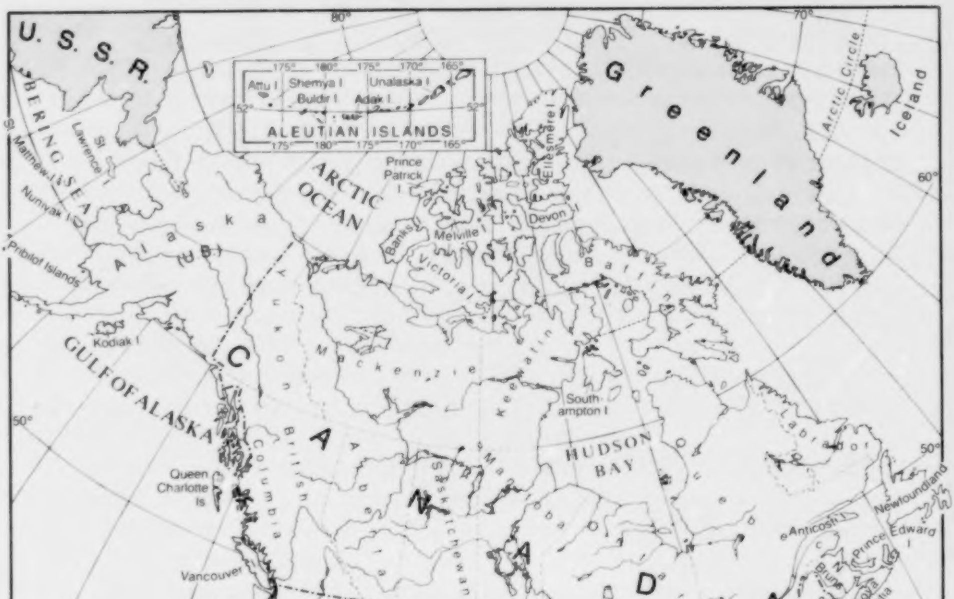
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Shemya I
Buldir I
Adak I
Unalaska I
BERING SEA
St Lawrence I
St Matthew I
Nunivak I
Pribilof Islands
Alaska (U.S.)
Kodiak I
GULF OF ALASKA
ARCTIC OCEAN
Prince Patrick I
Banks I
Melville I
Victoria I
Ellesmere I
Devon I
Baffin I
Greenland
Iceland
Arctic Circle
Yukon
Mackenzie
Keewatin
Southampton I
HUDSON BAY
Quebec
Labrador
Newfoundland
Anticosti I
Prince Edward I
Nova Scotia
New Brunswick
Maine
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Queen Charlotte Is
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Tres Marias I
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GULF OF CALIFORNIA
MEXICO
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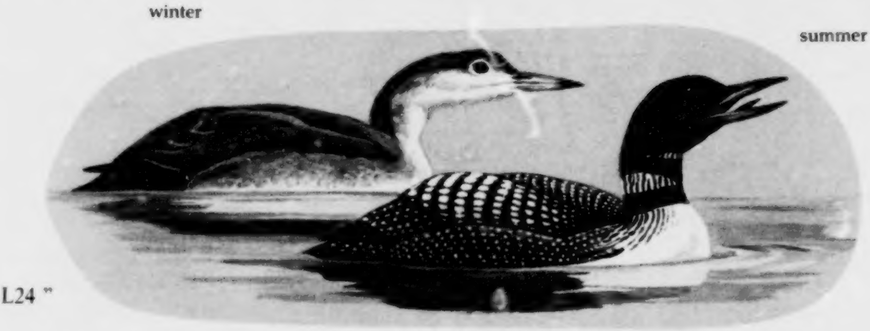
Tropic of Cancer
Cuba
BAHAMAS
Jamaica
Hispaniola
Puerto Rico
LESSER ANTILLES
CARIBBEAN SEA
Belize
Guatemala
Honduras
El Salvador
Nicaragua
130°
120°
110°
100°
90°
80°
70°
60°
50°
40°
30°
20°

Ranges described in text generally follow boundaries and names shown on this map, modified from the A.O.U. Checklist of North American Birds, 6th Edition, 1983.

Common Loon

Gavia immer



RANGE: Breeds from western and central Alaska and the northern Yukon east across Canada to southern Baffin Island and Newfoundland south to northern California (at least formerly), northwestern Montana, North Dakota, and northern Iowa east to southern New England and Nova Scotia. Winters principally along coast from Aleutian Islands south to California, from Newfoundland south to Gulf Coast, and on lakes and bays near coasts. During migration occurs on inland waters throughout most of the United States.

STATUS: Locally common.

HABITAT: Breeds on or near freshwater lakes, ponds, and occasionally riverbanks, from tundra south in either open or wooded habitat. Territories may range from entire lakes of more than 100 acres to bays of 15 to 20 acres.

SPECIAL HABITAT REQUIREMENTS: Bodies of water deep enough to escape from enemies by diving and large enough that it can take flight (up to 1/4 mile).

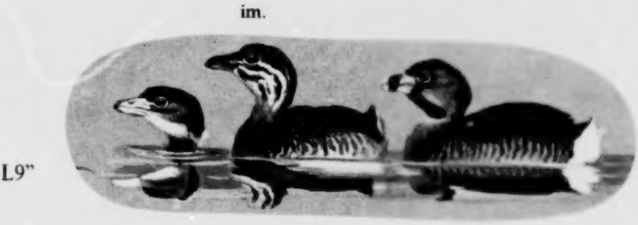
NEST: Nests on the ground as close to water as possible, on islands, in sheltered places in coves, or on promontories or headlands. May locate nests on bare soil, on floating or matted vegetation, on muskrat houses or on rocks. Same nest site may be used, presumably by same pair, year after year.

FOOD: Captures food during dives underwater. Generally eats approximately 80 percent fish with some crustaceans, vegetable matter, and insects, varying with locale.

REFERENCES: Palmer 1962, Smith 1981, Terres 1980, Vermeer 1973, Wahl in Farrand 1983a.

Pied-billed Grebe

Podilymbus podiceps



RANGE: Breeds in southeastern Alaska and from central Canada south locally through temperate North America. Winters through most of breeding range from southern British Columbia and the central United States southward, casually farther north. Also winters throughout West Indies, Central and South America.

STATUS: Common; most widespread grebe in North America.

HABITAT: Inhabits ponds with much shoreline and emergent vegetation, marshes with areas of open water 15 to 25 inches deep, and marshy inlets and bays. Found on ponds, sloughs, flooded areas, marshy parts of lakes and rivers, and occasionally estuarine waters with weak tidal influence.

SPECIAL HABITAT REQUIREMENTS: Marshes, sluggish streams, ponds 18 acres or less, and some emergent vegetation.

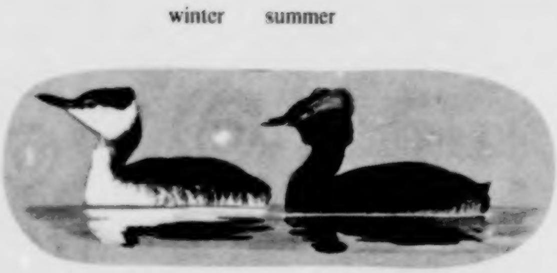
NEST: A solitary nester, with generally only one pair nesting per pothole. Constructs a floating nest usually in shallow water, but sometimes on water several feet deep and well concealed in emergent vegetation. Builds nest around or anchored to reeds, rushes, or bushes and usually within 50 feet of open water.

FOOD: Captures food while swimming and during dives. Primarily eats fishes, but also insects and some crayfish.

REFERENCES: Faaborg 1976, Glover 1953, Palmer 1962, Sealy 1978, Terres 1980, Wetmore 1924.

Horned Grebe

Podiceps auritus



RANGE: Breeds in North America from central Alaska and northern Yukon to northern Manitoba south to eastern Washington, central Wisconsin, and extreme western Ontario. Winters from the Aleutian Islands and southern Alaska along the Pacific Coast to southern California and along the Atlantic Coast from Nova Scotia to southern Florida. During winter primarily marine, off ocean beaches and rocky shores as well as in sheltered inlets and bays. May be found in any water as a migrant.

STATUS: Common in North America except in the Southwest.

HABITAT: Inhabits ponds, marshes, sloughs, backwaters of streams and rivers, shallow bays of large lakes, and flooded places with some open water. Can alight on and take wing from small streams. Early in breeding season, often found where relatively little plant cover extends above water.

SPECIAL HABITAT REQUIREMENTS: Small, shallow potholes of 18 acres or less.

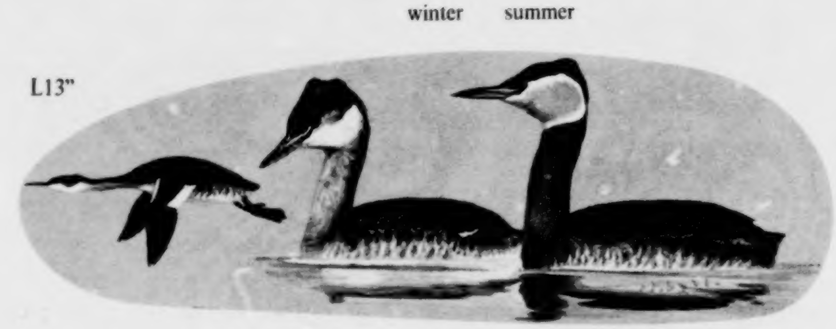
NEST: A solitary nester, with one pair occupying an entire pond. Builds nests commonly in quiet shallow water, usually well within a fringe of emergent vegetation, although sometimes very exposed. The floating, partly submerged nest is anchored to reeds or bushes or to bottom. Prefers to nest in small ponds with open water where territory can be observed visually.

FOOD: Usually feeds in water 5 to 25 feet deep. Food caught during long dives under water consists primarily of small fish, crayfish, amphipods, prawns, shrimp, aquatic and land insects, and some amphibians and leeches; may also include some vegetable matter. In winter, nearly half of diet may be crustaceans.

REFERENCES: Faaborg 1976, Ferguson 1981, Palmer 1962, Robbins et al. 1983, Terres 1980, Wetmore 1924.

Red-necked Grebe

Podiceps grisegena



RANGE: Breeds from western and central Alaska to south-central Ontario south to St. Lawrence Island, the Alaska Peninsula, central Washington to south-central Minnesota; rarely to southwestern Oregon, northern Michigan, southern Quebec and New Hampshire. Winters along Pacific and Atlantic Coasts and casually along Gulf Coast.

STATUS: Populations decreasing or stable.

HABITAT: Inhabits quiet inland waters on prairies, in woodlands, and extending out onto tundra. Less commonly found on prairie sloughs and marshes, backwaters of rivers, and flooded areas.

SPECIAL HABITAT REQUIREMENTS: Shallow lakes and ponds (rarely less than 10 acres per pair) with at least some emergent vegetation.

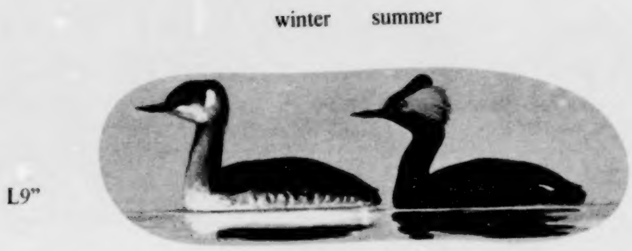
NEST: Usually a solitary nester although sometimes nests in loose colonies. Constructs an anchored floating nest on water 2 to 3 feet deep within or near edge of emergent vegetation such as cattails, sedges, rushes, and sometimes bushes. Sometimes builds nest on a muskrat house.

FOOD: Dives and feeds in water at or near the bottom. In marshes and lakes, consumes primarily aquatic insects and some fishes. Also takes land insects, crustaceans, mollusks, aquatic worms, amphibians, and some vegetative matter.

REFERENCES: Chamberlin 1977, Palmer 1962, Tate and Tate 1982, Terres 1980.

Eared Grebe

Podiceps nigricollis



RANGE: Breeds from south-central British Columbia and Manitoba south to Baja California and south-central Texas. Winters inland from California, Nevada, Utah, New Mexico, and central Texas and on the Pacific Coast from southern British Columbia south to Guatemala. Casual in eastern United States and also in Old World.

STATUS: Large breeding colonies and winter flocks common.

HABITAT: Inhabits marshy lakes and ponds, and large pools in streams or rivers in the prairie region of North America. Less typically inhabits marshes with some open water. During winter, found on salt lakes, bays, estuaries, and seacoasts.

SPECIAL HABITAT REQUIREMENTS: Freshwater lakes and ponds larger than 18 acres, with shallow margins and emergent vegetation.

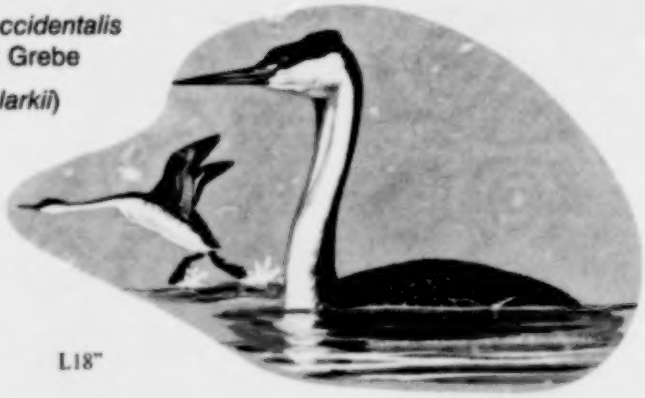
NEST: Nests in compact colonies or sometimes singly, in sheltered areas, or in shallow water away from emergent vegetation. Builds a floating nest that is a platform of marsh vegetation built up from the bottom or anchored to reeds.

FOOD: Gleans land insects from surface of water, or captures aquatic insects during dives. Also takes small crustaceans, small fishes, leech eggs, mollusks, and amphibians

REFERENCES: Faaborg 1976, Grinnell and Miller 1944, Low and Mansell 1983, Palmer 1962, Ratti in Farrand 1983a, Terres 1980, Verner and Boss 1980, Wetmore 1924.

Western Grebe

Aechmophorus occidentalis
(includes Clark's Grebe
Aechmophorus clarkii)



RANGE: Breeds from southeastern Alaska and south-central British Columbia to southwestern Manitoba south to southern California, New Mexico, northwestern Iowa, and western Minnesota. Winters along the Pacific Coast from southern British Columbia to Baja California, and from Utah, Colorado, New Mexico, and western and southern Texas south into Mexico.

STATUS: Locally abundant.

HABITAT: Inhabits fairly extensive areas of open water bordered by tall emergent plants. Found on marshes, lakes, and bays; in winter may be found on salt, brackish, and freshwater where small fishes are abundant.

SPECIAL HABITAT REQUIREMENTS: Open, fresh lakes bordered by rushes or tules.

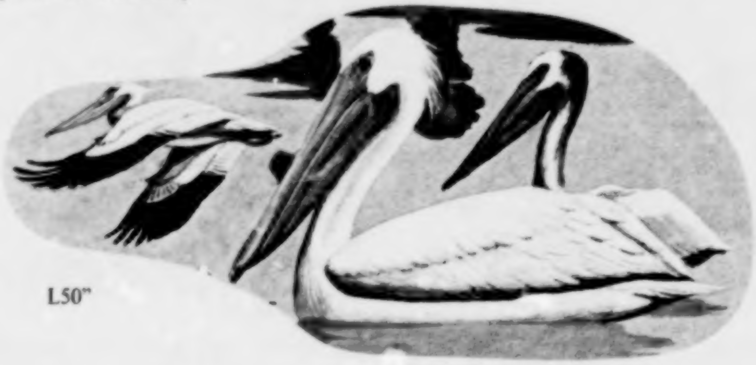
NEST: Nests in colonies of hundreds, even thousands of pairs at some lakes, but occasionally nests singly. Builds nests in colonies closely spaced, with territories consisting of only immediate vicinity of nest. Constructs nests in extensive areas of open water bordered by tules or rushes, in emergent vegetation, or on dry land. Prefers to nest near or on open shallow water about 12 inches deep. Anchors nests to, or builds on, submerged roots of bulrushes or other plants.

FOOD: Captures food during dives underwater. Consumes primarily fishes. Also takes mollusks, crabs, marine worms, salamanders, and insects.

REFERENCES: Grinnell and Miller 1944, Lindvall and Low 1982, Palmer 1962, Terres 1980, Wetmore 1924.

American White Pelican

Pelecanus erythrorhynchos
(formerly White Pelican)



RANGE: Breeds from south-central British Columbia to central Manitoba and southwestern Ontario south locally to extreme northern California east to northern Colorado, northeastern South Dakota, and southwestern Minnesota. Sporadic on central coast of Texas and from central to southern California. Winters along the Pacific Coast from central California and southern Arizona south to Central America, and from Florida and the Gulf States south; casually throughout breeding range in western North America.

STATUS: Locally common throughout breeding range.

HABITAT: Found primarily on lakes, also rivers, estuaries, and shallow coastal bays and inlets. Loafs on beaches, sandbars, and driftwood.

SPECIAL HABITAT REQUIREMENTS: In freshwater habitat, islands isolated from mammalian predators.

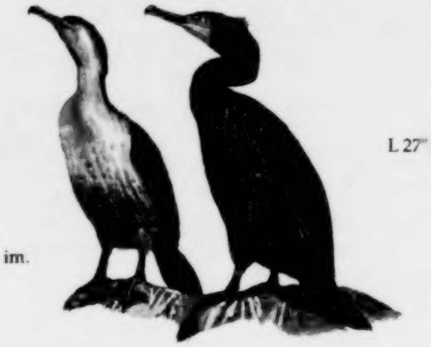
NEST: Nests on the ground in colonies of a few to several hundred pairs on small, relatively flat islands, without tall (over 3 feet) obstructions, with loose earth suitable for heaping into nest mounds. Rarely, nests on floating islands of marsh plants. Colonies prefer open areas of annual grasses and forbs, shrubs, and nonvegetated areas.

FOOD: Primarily consumes fish caught by scooping pouch into water while swimming. Groups often cooperate in fishing. Adults require about four pounds of food daily, and feeding areas may be located far from nesting areas. Also feeds on some salamanders and crayfish.

REFERENCES: Knopf 1979, Knopf and Kennedy 1981, Lingle and Sloan 1980, Palmer 1962, Terres 1980.

Double-crested Cormorant

Phalacrocorax auritus



L 27" W 50"

RANGE: Breeds in the southeastern Bering Sea, southern Alaska, and from southwestern British Columbia and northern Alberta to Newfoundland south along Atlantic and Pacific Coasts; very locally throughout interior of North America. Winters along the Pacific Coast from the Aleutian Islands and southern Alaska south to Baja California and Guerrero; on the Atlantic Coast from New England south; in the Mississippi and Rio Grande Valleys; and along the Gulf Coast south to Central America.

STATUS: Widespread and locally common.

HABITAT: Inhabits coastal areas, bays, estuaries, marine islands, freshwater lakes, ponds, rivers, sloughs, and swamps. (Only cormorant likely to be seen inland around freshwater lakes and rivers.) Has a pronounced preference for perching in trees, on rocks, buoys, or other objects that overhang or project from the water.

SPECIAL HABITAT REQUIREMENTS: Undisturbed nesting site and convenient, dependable food souce within a foraging radius of 5 to 10 miles from roost or colony.

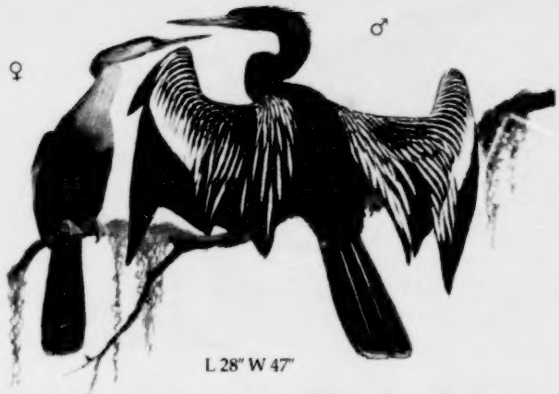
NEST: Nests in colonies of a few to 3,500 pairs on rocky islands, cliffs facing water, or in stands of live or dead trees in or near water. In the Northeast and along the Pacific Coast, nests on the ground, on rocky islands, or on cliffs. Inland and in Florida, usually nests in trees. Breeding colonies may be located from below sea level to over 5,600 feet.

FOOD: Captures food during dives in water, generally 5 to 25 feet deep but sometimes up to 72 feet deep. Prefers to hunt in water with a sandy bottom rather than over a rocky or gravelly bottom. Consumes primarily saltwater fish of little commercial value, plus freshwater yellow perch, bullheads, sticklebacks, carp, crappies, and sunfish. Also eats some salamanders, crustaceans, reptiles, mollusks, and sea worms.

REFERENCES: Palmer 1962, Stallcup in Farrand 1983a, Terres 1980.

Anhinga

Anhinga anhinga



RANGE: Breeds from central and eastern Texas east to coastal North Carolina and south to southern Brazil and Ecuador. Winters in southeastern United States from central South Carolina, Georgia, Florida, and the Gulf Coast southward. Occasionally disperses north of breeding range.

STATUS: Common throughout range.

HABITAT: Inhabits quiet or slow-moving, often rather murky waters. Usually found in wooded freshwater swamps, streams, or tree-fringed lakes with water lilies, lotus, and other aquatic vegetation. Found in cypress swamps, freshwater sloughs of sawgrass and reeds with scattered willow clumps, or mangrove-bordered salt and brackish bays, lagoons, and tidal streams. Primarily a freshwater bird, but will range to marine coasts. Often perches with wings partly extended to dry.

SPECIAL HABITAT REQUIREMENTS: Quiet, sheltered waters with some trees for perching.

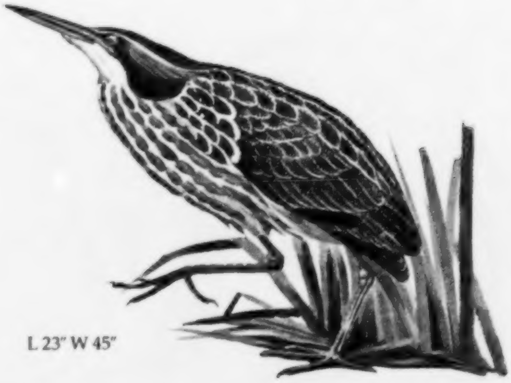
NEST: Nests in small groups with herons and egrets. May appropriate nests of common and snowy egrets or little blue herons, or construct its own. Nests are usually 3 to 10 feet above water.

FOOD: Catches food by diving under water from the surface, while flying over water, or from a perch. Eats primarily fish, but also takes aquatic insects, crayfish, shrimp, leeches, tadpoles, frog eggs, water snakes, young alligators, and small terrapins.

REFERENCES: Oberholser 1974a, Palmer 1962, Pough 1951, Sykes in Farrand 1983a, Terres 1980.

American Bittern

Botaurus lentiginosus



L 23" W 45"

RANGE: Breeds from extreme southeastern Alaska, central British Columbia, and southern Mackenzie to central Quebec and Newfoundland south to southern California, New Mexico, Texas, and Florida. breeds rarely south of northern California, Utah, Plains States, Ohio River Valley, and Virginia. Winters from southern British Columbia, Utah, New Mexico, central parts of Gulf States, and southern New England south to southern California, Gulf of Mexico, and along Atlantic Coast.

STATUS: Rather common, but elusive.

HABITAT: Inhabits freshwater or saltwater marshes, bogs, swamps, wet meadows, or wherever the ground is wet and tall, emergent vegetation such as cattails, bulrushes, and reeds are present. Usually perches on the ground, sometimes on a log or stump, or on cattails 3 to 4 feet above water, rarely in trees. Generally solitary; will freeze with neck and bill pointing upward, blending into marsh vegetation.

SPECIAL HABITAT REQUIREMENTS: Wetlands with tall, emergent vegetation.

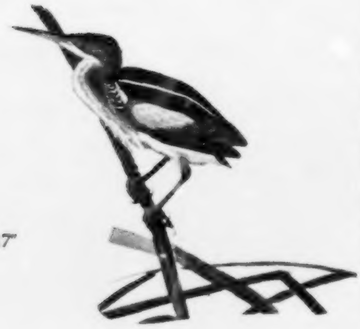
NEST: Usually a solitary nester, but may form loose colonies in favorable habitat. Typically nests on flimsy platform of cattails, reeds, or sedges, 4 to 5 inches above water in emergent vegetation, occasionally on the ground among grasses or in shrubs.

FOOD: Stalks food in marshes, meadows, along edges of shallow ponds, or wherever the ground is wet. Also searches for grasshoppers in dry meadows. Consumes mollusks, spiders, crustaceans, fish, frogs, salamanders, snakes, lizards, small birds, small mammals, eels, and land and aquatic insects.

REFERENCES: Armistead in Farrand 1983a, Grinnell and Miller 1944, Low and Mansell 1983, Palmer 1962, Robbins et al. 1983, Weller 1961.

Least Bittern

Ixobrychus exilis



L 11" W 17"

RANGE: Breeds locally from southern Oregon to central Baja California and southern coastal Sonora in the west; in the east across Canada from southern Manitoba, southern Ontario, and southern New Brunswick south to Texas, the Gulf Coast, Florida, and the Greater Antilles. Winters from southern California, southern Texas, and northern Florida south to Panama and Colombia.

STATUS: Locally common, but elusive.

HABITAT: Inhabits freshwater marshes, bogs, and swamps with dense cattails, reeds, bulrushes, buttonbush, sawgrass, smartweeds, arrowheads, and other tall aquatic and semi-aquatic vegetation. Prefers marshes with scattered bushes or other woody growth. Less commonly found in coastal brackish marshes and mangrove swamps. Usually is hidden in tall vegetation, and slips away by walking or climbing through reeds or even by running through them 2 to 3 feet above water, grasping a single reed or several in each foot.

SPECIAL HABITAT REQUIREMENTS: Freshwater wetlands surrounded by tall aquatic vegetation.

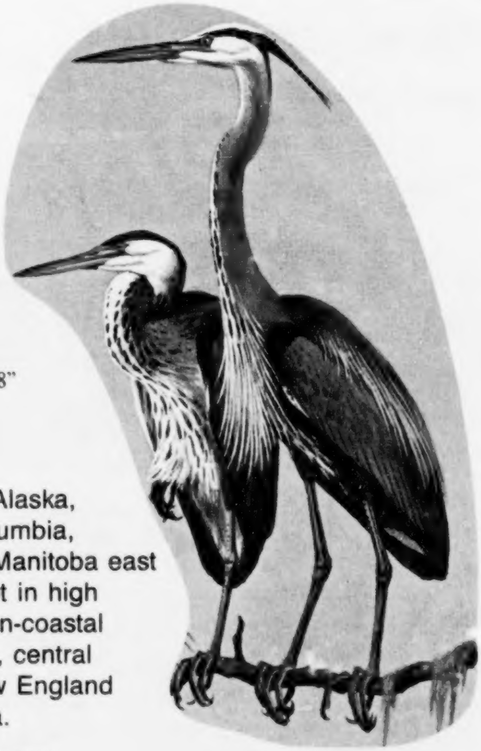
NEST: Nests singly in dense stands of emergent vegetation 6 to 24 inches above water that is 3 to 38 inches deep, and close to open water. Uses natural clump of the previous year's vegetation to form the foundation of the nest. Occasionally nests in bushes, and more rarely, on the ground.

FOOD: Feeds on the open water side of emergents, and captures small fish. Also takes frogs, tadpoles, salamanders, leeches, mollusks, crustaceans, insects, lizards, slugs, and occasionally small mammals.

REFERENCES: Low and Mansell 1983, Palmer 1962, Terres 1980, Weller 1961.

Great Blue Heron

Ardea herodias



L38"

RANGE: Breeds from southern Alaska, coastal and southern British Columbia, southern Keewatin, and central Manitoba east to Nova Scotia and south, except in high mountains. Winters from southern-coastal Alaska, coastal British Columbia, central United States, and southern New England south to northern South America.

STATUS: Common throughout range.

HABITAT: Inhabits a wide variety of freshwater and saltwater habitats including ponds, lakes, streams, rivers, marshes, wet meadows, tidal flats, sandbars, and shallow bays, or wherever shallow water or marsh vegetation is present.

SPECIAL HABITAT REQUIREMENTS: Open water or wetland habitats.

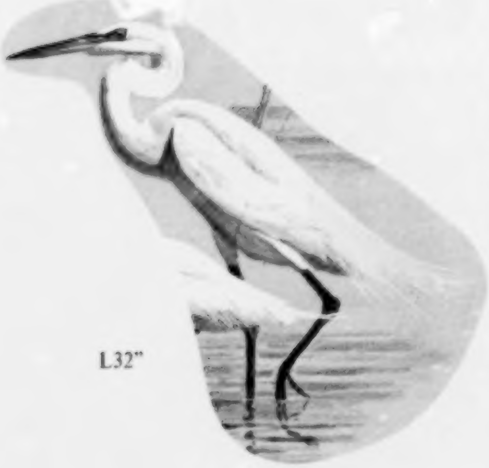
NEST: Generally nests in colonies, preferably in an isolated patch of woodland or on an island. Builds nests in the tops of the tallest trees, live or dead, often above 50 feet, but also in bushes, on rock ledges, sea cliffs, in tule rushes, and on the ground. In colonies, may build dozens of nests, which are used repeatedly, in the crown of the same tree. In mixed heronries, typically nests in highest parts of trees while other heron species occupy lower parts of same trees. May travel as far as 10 miles from nest sites to foraging areas.

FOOD: Usually stands motionless in shallow water and waits until prey comes within striking distance. Also forages in wet meadows, pastures, dry fields, and even along road shoulders and in suburban ponds. Consumes small fishes, frogs, salamanders, lizards, snakes, shrimp, crabs, crayfish, aquatic and land insects, leeches, and small mammals.

REFERENCES: Low and Mansell 1983, Palmer 1962, Pough 1951, Sykes in Farrand 1983a, Terres 1980, Verner and Boss 1980.

Great Egret

Casmerodius albus
(formerly Common Egret)



RANGE: Breeds from southern Oregon and southern Idaho south to southwestern Arizona, and from southeastern Saskatchewan, southwestern Manitoba, southern Ontario, and Maine south through the Gulf States to South America. Disperses after breeding to the north into Washington, Michigan, southern Ontario and Quebec, and the Maritime Provinces. Winters from northern California across southern United States, and south along Atlantic Coast from New Jersey through South America.

STATUS: Common throughout range.

HABITAT: Inhabits streams, ponds, lakes, rice fields, freshwater and saltwater marshes and lagoons, and mud flats. After feeding during day, flies singly or in small groups to a communal roost in trees or shrubbery. Gregarious during all seasons.

SPECIAL HABITAT REQUIREMENTS: Open water or wetland habitats near woodlands.

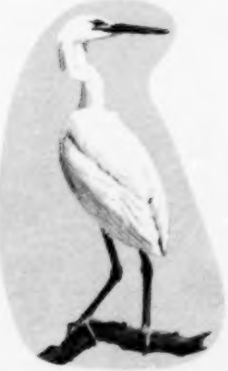
NEST: Nests singly or in colonies, often with other herons, ibises, wood storks, cormorants, and anhingas. Usually nests in woods or thickets near water so long as there is adequate support for the nest. Builds nest from 1 to 40 feet above ground, depending on substrate. Sensitive to disturbance by people when nesting and may flush at the slightest provocation.

FOOD: Forages in freshwater, brackish, or saltwater swamps, along streams, and in ponds. Consumes fishes, frogs, salamanders, snakes, snails, crustaceans, insects, and small mammals.

REFERENCES: Grinnell and Miller 1944, Low and Mansell 1983, Palmer 1962, Sykes in Farrand 1983a, Terres 1980.

Snowy Egret

Egretta thula



L20"

RANGE: Breeds from northern California and Montana south to central and eastern Texas, along the lower Mississippi Valley, and from Maine south along the Atlantic and Gulf Coasts to South America. After breeding, disperses north to Oregon, Nebraska, Great Lakes, and Atlantic Canada. Winters from northern California, southwestern Arizona, the Gulf Coast, and coastal South Carolina south throughout the breeding range.

STATUS: Common; breeding range expanding northward.

HABITAT: Inhabits ponds; borders of lakes; freshwater, brackish, and saltwater marshes and swamps; stream courses; tidal flats; rice fields; and sometimes dry fields, where it associates with cattle.

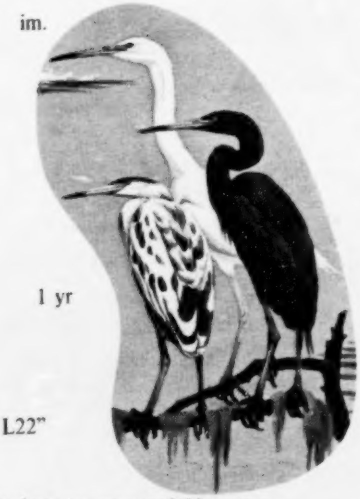
NEST: Nests in colonies (many coastal), sometimes with thousands of pairs or in smaller colonies with other herons, ibises, cormorants, and anhingas, or even singly. In western United States, commonly nests on the ground in cattail marshes; in other areas, may nest up to 30 feet high in trees and shrubs.

FOOD: Forages by rushing about and shuffling its feet in shallow water to flush its prey out of hiding. Consumes small fish, frogs, lizards, snakes, shrimp, fiddler crabs, crayfish, grasshoppers, cutworms, and aquatic insects.

REFERENCES: Grinnell and Miller 1944, Low and Mansell 1983, Palmer 1962, Sykes in Farrand 1983a, Terres 1980.

Little Blue Heron

Egretta caerulea



RANGE: Breeds from southeastern New Mexico to central Kansas, southern Arkansas, southeastern Missouri, southwestern Kentucky, northwestern Tennessee, central Alabama, southern Georgia, and along the Atlantic Coast from Maine, south to the West Indies and South America; sporadically in central Minnesota. After breeding, disperses north in interior to North and South Dakota, Michigan, southern Ontario and southern Quebec, and to Nova Scotia on Atlantic Coast. Winters from southern Baja California, the Gulf Coast, and coastal Virginia south throughout most of breeding range.

STATUS: Common; range is expanding.

HABITAT: Prefers freshwater ponds, lakes, marshes, meadows, and marshy shores of streams, but also inhabits brackish and saltwater coastal habitats. Roosts in trees and shrubs at night.

SPECIAL HABITAT REQUIREMENTS: Open water or wetland habitats.

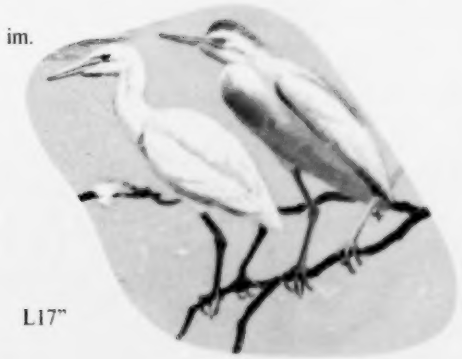
NEST: Nests in colonies of up to 100 in a variety of trees, usually hardwoods, almost invariably over or by freshwater. Tends to nest on the fringe of mixed colonies, often in company with the tricolored heron. Builds a flimsy platform nest, sometimes as high as 40 feet in trees and shrubs. Nests in willows, buttonbush, red maples, myrtles, and swamp privet.

FOOD: Forages in a slow, methodical manner ashore, in mud, or in very shallow water; not given to wading as deeply as some herons. Seldom feeds in saltwater. When water disappears from marshes and swamps, will live solely on insects caught in grasslands. Diet includes fishes, frogs, lizards, snakes, turtles, shrimp, fiddler crabs, crayfish, aquatic insects, spiders, grasshoppers, crickets, and beetles.

REFERENCES: Low and Mansell 1983, Palmer 1962, Sykes in Farrand 1983a, Terres 1980.

Cattle Egret

Bubulcus ibis



RANGE: Breeds locally from northwestern and central California, southern Idaho, northern Utah, Colorado, North Dakota, southern Saskatchewan, Minnesota, Wisconsin, southern Ontario, northern Ohio, and Maine south to Florida, West Indies, and Central and South America. After breeding, disperses north to southern British Columbia, southcentral Canada, and the Maritime Provinces. Winters throughout most of breeding range.

STATUS: Common; a recent immigrant from the Old World, range is rapidly expanding.

HABITAT: Frequents a great variety of habitats including pastureland, freshwater and salt marshes, fallow and plowed fields, orchards, citrus groves, road shoulders and median strips, vacant lots, lawns, and other open grassy areas. Least shy and least aquatic of North American herons; usually found in close association with large hoofed mammals, particularly cattle, and often perching on their backs.

SPECIAL HABITAT REQUIREMENTS: Wetlands for nesting.

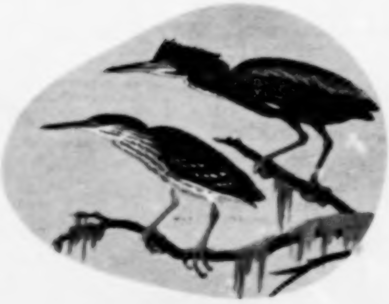
NEST: Nests colonially, often with other herons and ibises, in both freshwater and saltwater habitats, on islands, in willows and tamarisks along watercourses, occasionally in cypress swamps with a lower growth of buttonbush, or in scrub oaks in marshlands. Also nests in redcedar, red maple, and in pines. Usually builds nests at heights of 5 to 12 feet, up to 30 feet in heronries.

FOOD: Usually feeds in dry or moist open pastures among livestock, capturing insects and other prey disturbed as cattle walk and graze. May glean ticks or bugs off cattle. Consumes grasshoppers, leopard and cricket frogs, spiders, and some toads.

REFERENCES: Palmer 1962, Sykes in Farrand 1983a, Terres 1980.

Green-backed Heron

Butorides striatus
(formerly Green Heron)



RANGE: Breeds from southwestern British Columbia to northern California, southern Nevada and Utah, and north-central New Mexico, and from the western edge of the Great Plains States, southern Ontario and southern New Brunswick south to eastern Panama. After breeding, disperses north to eastern Washington, Idaho, and southern Canada. Winters from western Washington, coastal and southeastern California, southern Arizona, Texas and Louisiana, and northern Florida and South Carolina south to South America.

STATUS: Common, locally abundant.

HABITAT: Found in a wide variety of freshwater and saltwater habitats, primarily those in riparian deciduous zones. These include wet woodlands, lakeshores, ponds, rivers, streams, swamps, and marshes. Commonly alights on trees, stumps, or submerged debris, but roosts on or close to the ground.

SPECIAL HABITAT REQUIREMENTS: Wetlands or open water habitats.

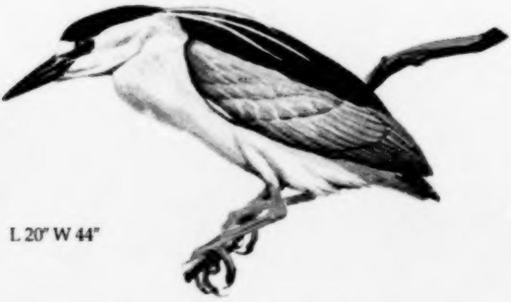
NEST: Generally a solitary nester, but sometimes nests in colonies of 6 pairs or more. Nest may be built away from water in dry woodlands and orchards, on a low tussock or muskrat house, or in trees near water, often a dense tangle in crowns of middle-aged trees, typically 10 to 15 feet above ground, but up to 30 feet.

FOOD: Captures prey while standing and waiting in shallow water, or by walking slowly, typically in a crouched position. Consumes fish, frogs, crayfish, mollusks, prawns, insects, leeches, earthworms, small snakes, snails, and mice.

REFERENCES: Low and Mansell 1983, Palmer 1962, Terres 1980, Verner and Boss 1980.

Black-crowned Night-Heron

Nycticorax nycticorax



L 20" W 44"

RANGE: Breeds from central Washington and east-central Alberta to southern Quebec, northeastern New Brunswick and Nova Scotia south locally through the United States to South America. Wanders a great deal. After breeding, disperses over most of the United States not within its breeding range, except northern Rocky Mountain region, and north into Canada. Winters in the Southwest and the lower Ohio Valley, Gulf Coast, and southern New England south throughout the breeding range.

STATUS: Common throughout most of its range.

HABITAT: Inhabits a wide variety of freshwater, brackish, and saltwater habitats almost anywhere a wader might exist, including lakes, ponds, marshes, wooded swamps, slow streams with pools, or rivers. Roosts by day, usually in a well-foliaged tree, not necessarily near feeding grounds.

SPECIAL HABITAT REQUIREMENTS: Open water or wetland habitats.

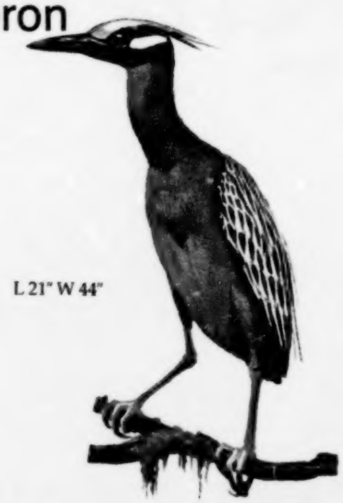
NEST: Nests in small to large colonies, usually with other heron species, in almost any habitat: wooded areas near coastal marshes, spruce groves on marine islands, hardwood forests on offshore islands, swamps, cattail marshes on prairies, clumps of tall grass on dry ground, apple orchards, and sometimes in city parks. Nests close together on the ground to over 160 feet high in trees, and may be well concealed or in the open.

FOOD: Forages mainly at night, by standing and waiting, or walking slowly along shallow margins of lakes, mud-bordered bays, and in marshy places where there is standing or slow-running water. Eats fish, frogs, tadpoles, salamanders, snakes, toads, crayfish, crabs, shrimp, squid, clams, mussels, dragonflies, algae, succulent plants, young birds, and small mammals.

REFERENCES: Grinnel and Miller 1944, Low and Mansell 1983, Palmer 1962, Sykes in Farrand 1983a, Terres 1980, Verner and Boss 1980.

Yellow-crowned Night-Heron

Nycticorax violaceus



RANGE: Breeds from central and northeastern Texas to southern Nebraska, southeastern Minnesota, east to the lower Ohio Valley, and eastern Tennessee, southeastern Pennsylvania and Massachusetts south to South America. After breeding, disperses north to eastern Colorado, Iowa, southern Ontario, and Atlantic Canada. Winters from the Gulf Coast and coastal South Carolina south throughout breeding range.

STATUS: Much less common than black-crowned night-heron.

HABITAT: Inhabits both freshwater and saltwater habitats, usually lush river swamps, but also tidal flats, stagnant backwaters or bayous of large cypress swamps, mangrove swamps, or dry, rocky, almost waterless areas on certain islands.

SPECIAL HABITAT REQUIREMENTS: Wooded swamps.

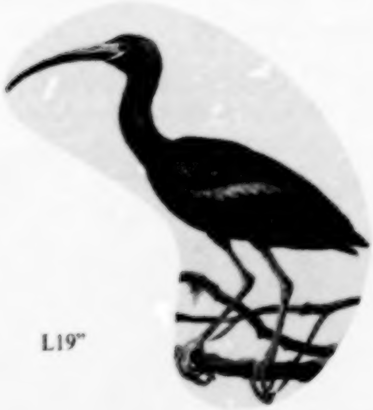
NEST: Nests in small to large colonies, sometimes with black-crowned, little blue, tricolored, and great blue herons, or singly, in trees or bushes and sometimes on the ground. Often nests in willows close to water, in mangroves, or in baldcypresses, usually 15 to 20 feet above ground.

FOOD: Hunts at night but also frequently by day. Unlike other herons, rarely takes fishes, but feeds largely on crustaceans, mainly crayfish, and land and fiddler crabs. Also eats mussels, frogs, aquatic insects, snails, small snakes, lizards, leeches, and terrapins.

REFERENCES: Low and Mansell 1983, Palmer 1962, Sykes in Farrand 1983a, Terres 1980.

Glossy Ibis

Plegadis falcinellus



L19"

RANGE: Breeds locally from Maine and Rhode Island south to Florida, and west on the Gulf Coast to Louisiana. Also inland, at least casually, in Arkansas. Wanders, at least, casually, to the Midwest and southern Canada. Winters from northern Florida and the Gulf Coast of Louisiana south to South America.

STATUS: Locally common; initially an irregular breeding bird in North America in small colonies along Atlantic Coast, but recently has increased in numbers.

HABITAT: Found in freshwater, brackish, and saltwater habitats, primarily marshes and estuaries. Prefers shallow pools bordered by shrubs and emergent vegetation.

SPECIAL HABITAT REQUIREMENTS: Wetlands.

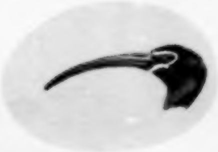
NEST: Nests in small colonies, usually with herons or other waders in a variety of habitats; in willows or mixed growths of mangroves, tropical buttonwood and salt myrtle in Florida; in willows, gum, swamp maple, bay and buttonbush in cypress swamps of South Carolina; on islands of tamarisk, waxmyrtle, and salt myrtle; in cordgrass; in mixed stands of holly, redcedar, bayberry, wild cherry, sumac, salt myrtle, Virginia creeper, wild grape, and cat greenbrier on barrier beaches along New Jersey Coast; and in cattail marshes. Nests on platforms on the ground in marshes, up to 10 feet high in shrubs and trees growing in water, in sites well covered with vegetation.

FOOD: Forages by probing in soft mud flats and in flooded fields. Eats mostly crayfish, but also snakes, grasshoppers, cutworms and other grubs, and leeches.

REFERENCES: Burger and Miller 1977, DeGraff et al. 1980, Low and Mansell 1983, Palmer 1962, Terres 1980.

White-faced Ibis

Plegadis chihi



L19"

RANGE: Breeds locally from central California, eastern Oregon, southern Idaho, Montana, southern North Dakota, and southwestern Minnesota south to Mexico; and from eastern Texas, southern Louisiana east occasionally to Florida. Wanders, at least casually, north to southern Canada. Winters from southern California and the Gulf Coast of Texas and Louisiana south to Mexico.

STATUS: Uncommon; nesting populations have been greatly reduced due to use of pesticides and herbicides by rice farmers.

HABITAT: Inhabits wetland habitats, preferably marshes and sloughs or ponds surrounded by low bushes or willows, and emergent vegetation such as bulrushes. Also in tule or bulrush swamps, in centers of ponds, and in irrigated rice fields. Roosts in marshes in the evenings.

SPECIAL HABITAT REQUIREMENTS: Freshwater marshes and sloughs.

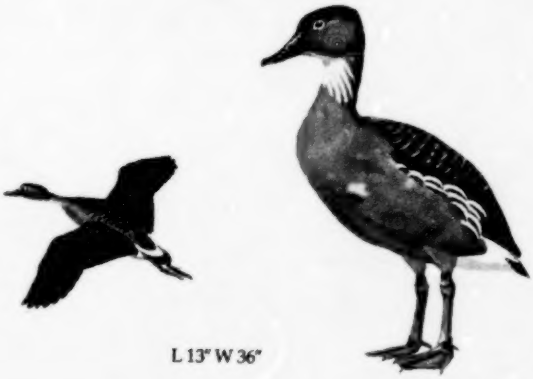
NEST: Colonial nester, sometimes with or near colonies of great blue and black-crowned night-herons, or snowy egrets. Generally nests in large beds of bulrushes or reeds several feet above water; on floating mats of dead plants, in cattails and hardstem and alkali bulrush; or infrequently on dry land. On land, prefers to nest on the ground among low shrubs and mixed forbs rather than in grass or cactus. Generally nests in areas well covered with vegetation.

FOOD: Feeds by probing in freshwater marshes. Consumes insects, newts, leeches, worms, mollusks, crustaceans (especially crayfish), frogs, fishes, and some snails. After nesting season, feeds in larger marshes as well as in irrigated fields.

REFERENCES: Burger and Miller 1977, Oberholser 1974a, Palmer 1962, Ryder 1967, Terres 1980.

Fulvous Whistling-Duck

Dendrocygna bicolor



RANGE: Breeds from southern California to southwestern Arizona, and from central and eastern Texas and the Gulf Coast of Louisiana, south to Mexico; locally in southern Florida. Wanders sporadically throughout North America. Winters from southern California, southern Arizona, the Gulf Coast, and southern Florida south to Mexico.

STATUS: Fairly common, but population levels fluctuate.

HABITAT: Inhabits marshlands, wet meadows, and in North America, primarily flooded agricultural land and rice fields. Does not ordinarily frequent woodlands. Loafs among dense bulrushes or far out on marshy ponds.

SPECIAL HABITAT REQUIREMENTS: Broad, open marshlands.

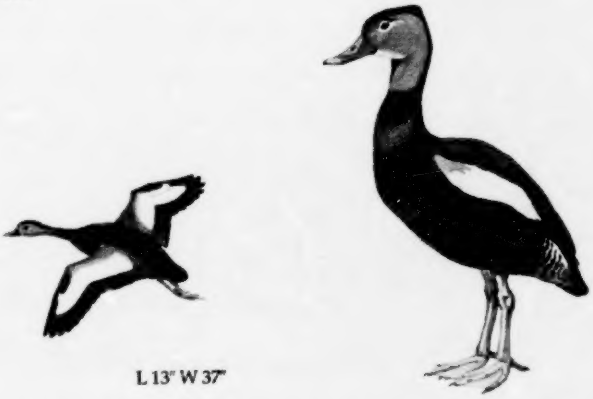
NEST: Prefers to nest in rice fields on low, contour levees, as well as a few inches over water among rice plants and wood growing between levees. Also nests in bulrushes, in knotgrass and dense beds of cattails, on hummocks in marshes, at the edge of ponds and swamps, or in rank tall grasses of wet meadows; rarely in tree cavities.

FOOD: Feeds primarily at night, walking about on land gleaning seeds of grasses and weeds. Also tips up in shallow water, and visits cornfields for waste grain. Has a mainly vegetarian diet that includes rice, millets, nutgrass, knotgrass, signalgrass, water shield, and alfalfa.

REFERENCES: Baldwin et al. 1964, Bellrose 1976, Cottam and Glazner 1959, Terres 1980, USDA 1981.

Black-bellied Whistling-Duck

Dendrocygna autumnalis



RANGE: Resident in southern Arizona, central and southeastern Texas, and south into South America.

STATUS: Rather common within its breeding range, but only a straggler outside.

HABITAT: Prefers open woodlands, groves or thicket borders of ebony, mesquite, retama, huisache, and cacti near banks and shallows of rivers, ponds, or marshes. In semiarid southern Texas, it has adapted to some constructed "water habitats" such as small reservoirs and stock tanks. May loaf on shores of small ponds and frequently perches in trees; usually does not alight or swim on deep water.

SPECIAL HABITAT REQUIREMENTS: Shallow waters or wetlands, and natural cavities in trees or depressions in ground near water for nesting.

NEST: Nests in cavities of elms, willows, live oaks, ebony, mesquite, hackberry, and other trees; also in nest boxes and on the ground. Nest trees may be standing in or located up to 3,000 feet from water, while ground nests are usually in grazed brush pastures, well hidden under low shrubs, and usually near water. Uses natural cavities with entrance holes ranging from 4 by 4.75 inches to 7 by 12.5 inches, and located about 9 feet above ground or water.

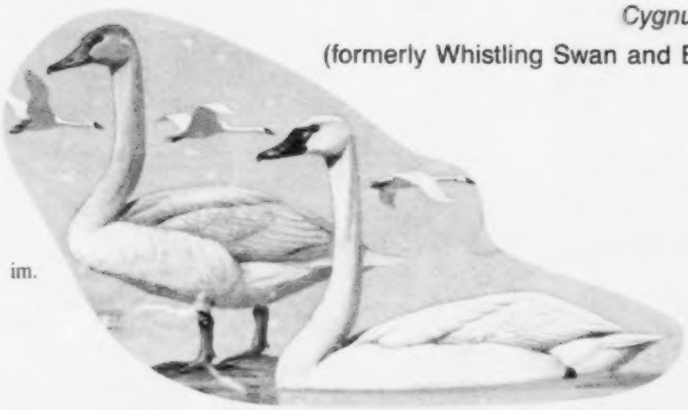
FOOD: Often feeds at night by grazing in stockyards, pastures, or fields, or by tipping or standing in shallow water. Has a primarily vegetarian diet that includes many cultivated plants, stock foods, and native plants. Consumes about 8 percent animal material, including insects, mollusks, and snails.

REFERENCES: Baldwin et al. 1964; Bellrose 1976; Bolen 1967a, 1967b; Bolen and Forsyth 1967; Johnsgard 1975b; Meanley and Meanley 1958; Terres 1980.

Tundra Swan

Cygnus columbianus

(formerly Whistling Swan and Bewick's Swan)



RANGE: Breeds from northwestern Alaska south to St. Lawrence Island and the Alaska Peninsula, and east near the Arctic Coast of Baffin Island, thence south around Hudson Bay to Churchill and the Belcher Islands. Winters mainly near coast from southern Alaska through British Columbia to Pacific states and northern Baja California (casual); also in southern Great Basin to northern New Mexico; and in mid-Atlantic states, rarely on Gulf Coast.

STATUS: The most common and widespread swan in North America.

HABITAT: Inhabits lakes, ponds, sluggish streams, and occasionally swamp bogs on open tundra while breeding; may be found along coastal estuaries when not breeding. During winter, primarily found on sizeable reservoirs; shallow, productive lakes of the interior; other sheltered freshwater habitats; or on coastal bays and estuaries.

SPECIAL HABITAT REQUIREMENTS: Open water or wetlands on Arctic tundra.

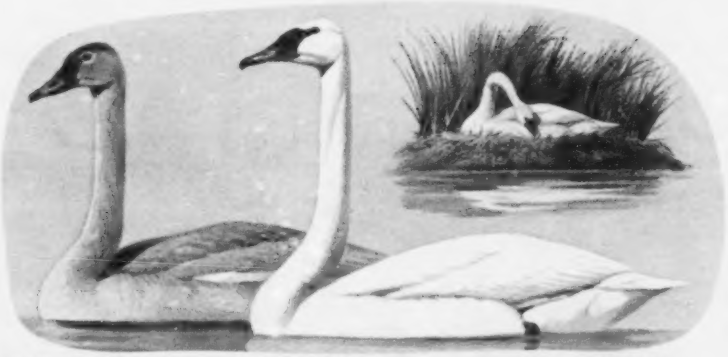
NEST: Builds nests on the ground along water's edge, on hummocks in marshes or tidal meadows, or on low hills up to one-half mile from water; seems to prefer to nest on small islands in shallow tundra pools. Rarely nests on level stretches in marsh or meadow areas.

FOOD: Feeds by plunging head under water and uprooting aquatic vegetation, preferably in shallow water, and occasionally by tipping up in deeper water, or by grazing in fields. Most commonly eats aquatic plants, but also eats waste corn, soybeans, shoots of winter wheat, grasses, sedges, and thin-shelled mollusks.

REFERENCES: Bellrose 1976, Terres 1980, Tohish in Farrand 1983a, Verner and Boss 1980, USDA 1981.

Trumpeter Swan

Cygnus buccinator



RANGE: Breeds locally throughout Alaska and from southern British Columbia and southwestern Saskatchewan south to southeastern Oregon, eastern Idaho and northwestern Wyoming. Was introduced and is now established at Ruby Lake in Nevada and in southwestern South Dakota. Winters from southern Alaska, western British Columbia, southern Alberta (rarely) and Montana south to northern (casually southern) California, occasionally to Utah, New Mexico, and eastern Colorado.

STATUS: Once near extinction, the population has increased to more than 4,000 birds.

HABITAT: Typically found in open boreal forest; prefers large shallow, fertile marshes or lakes (up to 4 feet deep) with a profusion of submerged and emergent aquatic plants, and generally untimbered but well-vegetated shorelines. During winter, prefers shallow lakes, streams, and ponds with open water that are bordered by some level and open terrain.

SPECIAL HABITAT REQUIREMENTS: Shallow, sheltered waters that do not have a fluctuating water level, and some margins of emergent vegetation.

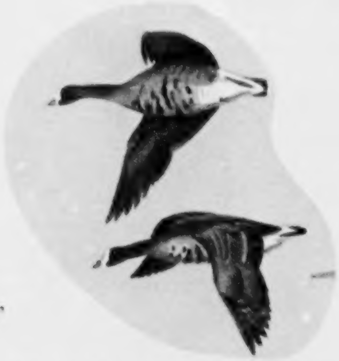
NEST: Nests on the ground on any site above the general level of the marsh terrain, preferably on muskrat houses surrounded by water 1 to 3 feet deep. Also nests on shore in sedges, bulrushes, cattails, rushes, or in horsetail. Has a nesting territory that ranges from 70 acres along irregular shorelines to 150 acres along straight shorelines.

FOOD: Feeds primarily in shallow waters of lakes or open marsh, digging up roots and tubers of aquatic plants, or snapping off plant parts with bill; rarely feeds on land. Eats a variety of marsh and aquatic plants.

REFERENCES: Banko 1960, Bellrose 1976, Johnsgard 1975b, Terres 1980, Van Wormer 1972.

Greater White-fronted Goose

Anser albifrons



L20"

RANGE: Breeds from northern Alaska south to Bristol Bay and Cook Inlet, and east across northern Yukon, northern Mackenzie and southern Victoria Island to northern Keewatin. Winters from southern British Columbia south along the coastal states; on the Gulf Coast from Texas and Louisiana south to Mexico; and rarely in the lower Mississippi Valley from Missouri southward.

STATUS: Common throughout range.

HABITAT: Inhabits the borders of shallow marshes and lakes, riverbanks and islands, deltas, dry knolls, and hills near rivers and ponds in Arctic tundra. Generally found in areas characterized by dwarf birch, willows, bilberries, crowberries, Labrador tea, cassiope, raspberries, dryas, sedges, horsetails, cottongrasses, bluegrass, fescue, arctic grass, sphagnum moss in depressions, and reindeer moss and cetaria on drier sites. Rests on shallow ponds and sloughs in marshes. Winters in sheltered inland and coastal marshes and on open terrain and pasturelands with small bodies of water.

SPECIAL HABITAT REQUIREMENTS: Wetlands in Arctic tundra.

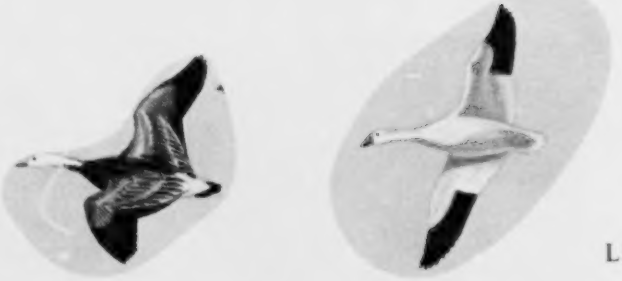
NEST: Typically nests in depressions on the ground in tall grass bordering tidal sloughs or in sedge marshes, usually within 300 feet of water, or on hummocks along rivers, streams, and lakes. Generally does not nest in colonies but may be found in loose colonies of 15 to 20 pairs in favored locations.

FOOD: Primarily grazes on marsh grasses, freshly sprouted grain in fields, and fresh growth in burned-over pastures. Sometimes feeds heavily on aquatic plants and in grain fields after harvest. In the Arctic, consumes tundra plants, aquatic insects and their larvae, and berries.

REFERENCES: Bellrose 1976, Dzubin et al. 1964, Johnsgard 1975b, Pough 1951, Terres 1980.

Snow Goose

Chen caerulescens



RANGE: Breeds from northern Alaska east along the Arctic Coast and islands of Canada to Baffin Island, south to Southhampton Island and along both coasts of Hudson Bay to the head of James Bay. Winters from the Puget Sound of British Columbia and Washington south to the interior valleys of California and Mexico; in southern New Mexico; from Kansas and Missouri south to the Gulf Coast; and along the Atlantic Coast from New York to Florida. During migration, found on large staging areas in the Dakotas, Minnesota, Iowa, and Nebraska.

There are two races of the snow goose, the "lesser" and the "greater." The lesser snow goose has two color phases—a dark phase, or blue goose, and a white phase—while the greater is believed to only have a white phase, and generally breeds farther north than the lesser.

STATUS: Locally abundant.

HABITAT: Inhabits islands of the Canadian Arctic Archipelago or is found within 5 miles of salt water on flat tundra of marsh grasses and sedges, in limestone basins, on islands of river deltas, or on plains usually drained by large rivers that open early in the season. During winter, uses both freshwater and saltwater marshes and wet prairies.

SPECIAL HABITAT REQUIREMENTS: Wetlands on arctic tundra.

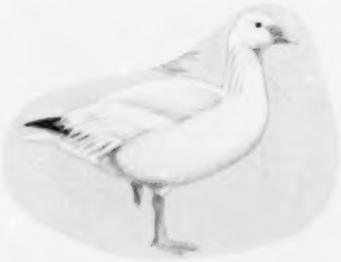
NEST: Nests in a shallow depression on the ground in large, loose colonies, on dry sites, primarily in unspoiled, primitive areas. Nests, well concealed by tundra grasses and sedges, as close as 15 to 20 feet from each other on flat land.

FOOD: Feeds by browsing in cultivated fields on winter wheat, in pastures on sprouting grasses, or on waste grain in stubble fields, also by digging out bulbous roots and soft parts of sedges, rushes, marsh grasses, and aquatic plants.

REFERENCES: Bellrose in Farrand 1983a, Cooch 1964, Lemieux 1959, Terres 1980, Verner and Boss 1980.

Ross' Goose

Chen rossii



L16"

RANGE: Breeds primarily in the Queen Maud Gulf area of northern Mackenzie and northwestern Keewatin, but also on southern Southhampton Island and along the west coast of Hudson Bay south to Cape Churchill. Winters almost exclusively in the Central Valley of California and the Salton Sea; also in small numbers along the Rio Grande, New Mexico, and Gulf Coast of Texas.

STATUS: Rare a few decades ago, now quite abundant in recent years.

HABITAT: Inhabits island-studded lakes and deltas of low tundra country. Prefers islands that rise 10 to 20 feet above water level, are covered with rocks and shrubs interspersed with areas of open, level ground, and are surrounded by shallow water (under 5 to 6 feet deep) extensive enough to discourage predators from swimming across. During winter, found on freshwater and brackish marshes and on wet prairies, often in association with the snow goose.

SPECIAL HABITAT REQUIREMENTS: Islands in Arctic tundra lakes.

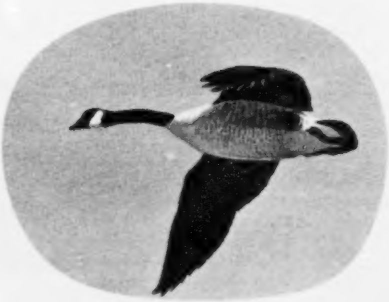
NEST: Nests on the ground in loose colonies, preferably on islands in mixed habitats of dwarf birch and rocks, or occasionally along river or lake shores if islands are unavailable.

FOOD: Eats grain and new green growth of grasslands and grain fields.

REFERENCES: Barry 1964, Bellrose in Farrand 1983a, Johnsgard 1975b, Ryder 1967, Terres 1980.

Canada Goose

Branta canadensis



L16-26"

RANGE: Breeds from the Arctic Coast of Alaska and northern Canada east to Baffin Island, south to central California, east to western Tennessee, southern Ontario and Quebec, and Newfoundland. Winters from south-coastal and southeastern Alaska, British Columbia and southern Alberta east to the Atlantic Coast of Newfoundland, and south to Mexico, the Gulf Coast and northern Florida.

STATUS: Common; 11 subspecies of the Canada goose are currently recognized.

HABITAT: Found in a variety of habitats near water, from forested and prairie regions to tundra, breeding on swamps, marshes, meadows, rivers, banks of lakes and ponds, and on islands. Winters in tidewater areas, marshes, inland refuges, and in flooded fields.

SPECIAL HABITAT REQUIREMENTS: Elevated habitat feature or artificial structures near water for nesting.

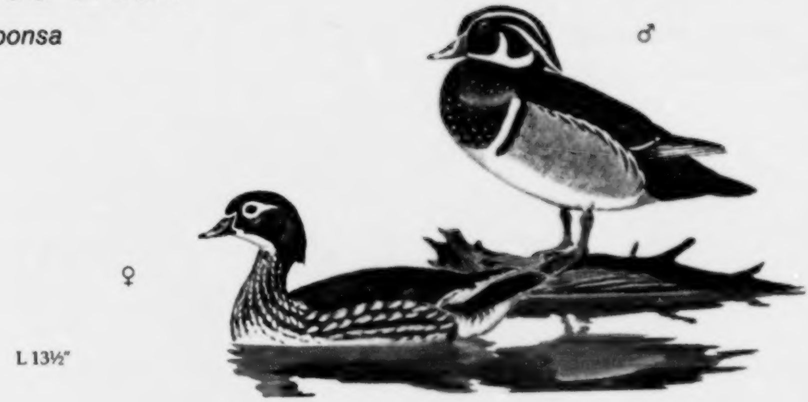
NEST: Usually nests on the ground near water (generally within 150 feet), preferably on a slightly elevated site that is isolated and affords good visibility of the surrounding area. Prefers muskrat houses for nesting but will also nest on small islands lacking tall growth, haystacks, rocky cliffs, hummocks, ridges of silt, pond banks, beaver lodges, and occasionally abandoned nests of ospreys, ravens, owls, or herons. Has successfully adapted to nesting on artificial structures.

FOOD: Essentially a grazer, preferring young, green tender plants. Consumes various grasses and forbs, both terrestrial and aquatic. Consumes agricultural crops as primary food during migration and winter. Also consumes small amounts of insects, insect larvae, mollusks, and small crustaceans.

REFERENCES: Bellrose 1976, Hansen and Nelson 1964, Terres 1980, VanWormer 1968.

Wood Duck

Aix sponsa



RANGE: Breeds in western North America from southern British Columbia and southwestern Alberta south to central California and western Montana; in eastern North America from east-central Saskatchewan east to Prince Edward Island and Nova Scotia south (east of the Rockies) to central and southeastern Texas and the Gulf Coast. In the West, winters irregularly throughout the breeding range; in the East, winters primarily in the southern parts of the breeding range.

STATUS: Common; population has increased in recent years primarily because of the availability of artificial nest structures and protection for most of the year.

HABITAT: Inhabits woodlands near shallow, quiet inland lakes, swamps, river bottoms, ponds, marshes, and streams where nest sites are available. Important forest types are central and southern floodplain forests, red maple swamps, temporarily flooded oak forests, and northern bottomland hardwoods. Prefers areas with many perching sites.

SPECIAL HABITAT REQUIREMENTS: Nest holes in trees or nest boxes in or near still or slow-moving water.

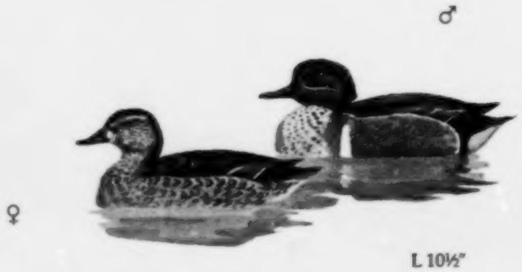
NEST: Prefers to nest in natural cavities 20 to 50 feet above ground with entrance holes of 4 inches in diameter, cavity depths of 2 feet, and cavity bottoms measuring 10 by 10 inches. Uses nest trees in (or up to one-half mile from) water 3 to 18 inches deep. Readily accepts nest boxes provided with nesting materials of wood shavings or sawdust.

FOOD: Eats about 90 percent plant material. Forages in ponds, marshes, sluggish streams, or along wooded banks for floating duckweeds, baldcypress cones and galls, seeds and tubers, wild rice, acorns, beechnuts, hickory nuts, grapes, berries, corn, and wheat. Also eats some invertebrates, such as spiders and aquatic insects.

REFERENCES: Bellrose 1976, Grice and Rogers 1965, McGilvrey 1968, Palmer 1976b, Terres 1980.

Green-winged Teal

Anas crecca



RANGE: Breeds from Alaska, northwestern and southern Mackenzie to north-central Labrador and Newfoundland south to central Oregon, Colorado, southern Ontario and Quebec, and Nova Scotia; Breeds locally from southern California east to southern New Mexico, Iowa, and Pennsylvania, and on the Atlantic Coast to Delaware. Winters from southern Alaska and southern British Columbia to New Brunswick and Nova Scotia south to Central America; also winters in the Hawaiian Islands.

STATUS: Relatively common throughout range.

HABITAT: Inhabits inland waters with dense rushes or other emergent vegetation on mixed and shortgrass prairies, and northern boreal forests. May be found resting on mudbanks or stumps, or perching on low limbs of dead trees. Winters in both freshwater and brackish marshes, ponds, streams, and estuaries.

SPECIAL HABITAT REQUIREMENTS: Lakes, marshes, ponds, pools, and shallow streams.

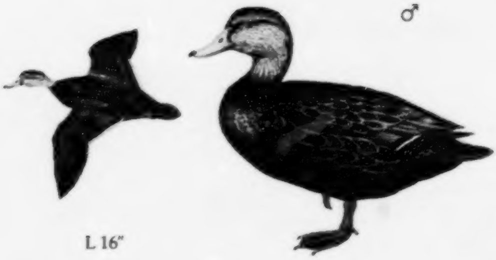
NEST: Nests in a depression on dry ground located at the base of shrubs, under a log, or in dense grass, usually 2 to 300 feet (but up to one-quarter mile) from water.

FOOD: Feeds in shallow marshes or temporarily flooded fields by dabbling, or by probing on mud flats. Consumes a diet that is about 90 percent vegetative, consisting of seeds of aquatic plants, grains, berries, wild grapes, mast, and (to a lesser extent) the vegetative parts of aquatic plants. Also eats some insects, small mollusks, and crustaceans.

REFERENCES: Bellrose 1976, Harrison 1975, Palmer 1976a, Terres 1980.

American Black Duck

Anas rubripes
(formerly Black Duck)



RANGE: Breeds from northern Saskatchewan to Labrador and Newfoundland south to northern South Dakota, northern Illinois, central West Virginia, and on the Atlantic Coast to North Carolina. Winters from southeastern Minnesota and central Wisconsin to New Brunswick and Nova Scotia south to southern Texas, the Gulf Coast and south-central Florida. Winters as far north as open water and food are available.

STATUS: Common, but the population is declining.

HABITAT: Inhabits a wide variety of wetland habitats along the coast and in woodlands, including open boreal forests and mixed hardwoods; sometimes is found in stubble fields or berry barrens. Generally is extremely adaptable as long as there is some source of water. Prefers to winter on brackish marshes bordering bays, estuaries, and agricultural lands but may also be found on lakes, reservoirs, rivers, freshwater marshes, and old rice fields.

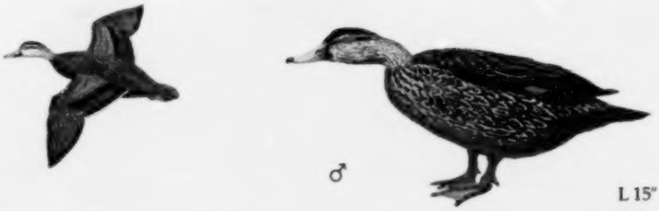
NEST: Generally nests in a hollow on dry, slightly elevated ground in wooded areas, well-concealed in thickets, briars, shrubs or grasses, usually near (but possibly a mile or more from) water. Occasionally uses old crow or hawk nests and natural or excavated cavities in trees or tops of rotted stumps.

FOOD: Forages by dabbling in shallow water, and by gleaning and grazing in fields. Has a diet that varies widely, depending on habitat. In fresh and brackish areas eats mostly plants; in marine environments eats mostly animals. Consumes primarily blue mussels, submerged aquatic plants, waste grains, acorns, seeds of marsh plants, crustaceans, earthworms, amphibians, and fishes.

REFERENCES: Bellrose 1976, Benson 1968, Coulter and Mendall 1968, DeGraff et al. 1980, Johnsgard 1975b, Palmer 1976a.

Mottled Duck

Anas fulvigula



RANGE: Breeds along the Gulf Coast from southern Louisiana and Texas into Mexico; in peninsular Florida; and locally inland in southeastern Colorado, western Kansas, Oklahoma, and northeastern Texas. Winters in the breeding range and casually along the entire Gulf Coast into Mexico. In Florida, does not migrate.

STATUS: Locally common.

HABITAT: Primarily inhabits extensive coastal marshes with a good interspersion of ponds but is also found in rice fields and on ponds and stream banks in pasture and farmlands. In Florida, inhabits ponds and lakes of pine flatwoods, everglades, cultivated and fallow fields, fresh and brackish marshes, mangrove swamps, and baldcypress-watertupelo hummocks.

SPECIAL HABITAT REQUIREMENTS: Freshwater and marine wetlands.

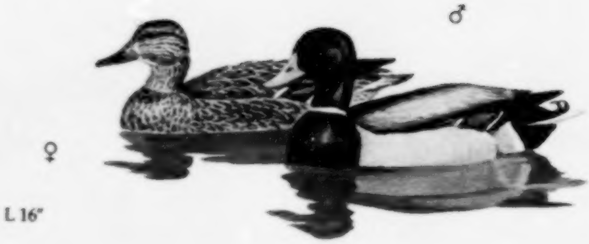
NEST: Builds a nest that is usually well concealed in a clump of grass, or on the ground under a bush, in meadows, generally within 500 feet of water. Prefers to nest near coastal marshes, but will also nest near ponds, bayous, or ditches. Is shy and sensitive to human disturbance.

FOOD: Feeds heavily on animal foods such as fish, crayfish, snails, and insects; also eats seeds of millet, rice, grasses, and aquatic plants.

REFERENCES: Beckwith and Hosford 1957, Bellrose 1976, Sincock et al. 1964, Singleton 1968.

Mallard

Anas platyrhynchos
(includes Mexican Duck)



RANGE: Breeds from northern Alaska east to southern Keewatin and across to southern Maine south to California, the southern Great Basin and New Mexico, and from Oklahoma east through the Ohio Valley to Virginia. Winters generally from southern Alaska and southern Canada south to central Mexico. Introduced and established in the Hawaiian Islands.

STATUS: The most common and widely distributed duck in North America.

HABITAT: Inhabits ponds, lakes, rivers, streams, marshes, wet meadows, and wooded swamps of primarily mixed and shortgrass prairie; also inhabits boreal forest region and sub-arctic deltas. Winters on inland ponds and rivers with some open water; less commonly in coastal marshes.

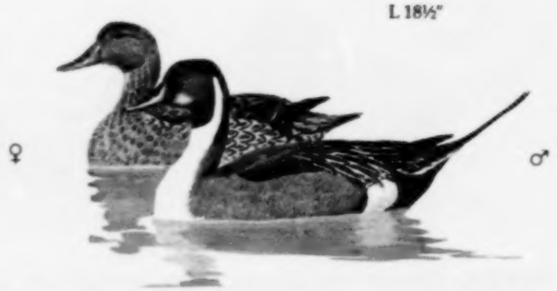
NEST: Typically nests on the ground in dry or slightly marshy areas within 300 feet of water, sometimes as far as 1.5 miles away in grasslands. Conceals nest well in snowberry clumps, among weeds and grasses, in pastures, stubble, or cultivated fields, or in marsh vegetation; rarely in cavities, on hollowed tops of stubs, or in tree crotches.

FOOD: Feeds by dabbling in shallow waters of ponds, sloughs, lakes, streams, and swamps, and by grazing and gleaning in grainfields and meadows. Consumes seeds, acorns, nuts, waste grains, aquatic insects, mollusks, tadpoles, frogs, small fish, and fish eggs.

REFERENCES: Bellrose 1976, DeGraff et al. 1980, Johnsgard 1975b, Palmer 1976a, Terres 1980.

Northern Pintail

Anas acuta
(formerly Pintail)



RANGE: Breeds from northern Alaska across northern Canada to northern and eastern Quebec, New Brunswick, and Nova Scotia to California, across to the Great Lakes, St. Lawrence River, and Maine. Winters from southern Alaska south to northern New Mexico, and east to central Missouri and the Ohio Valley (uncommonly); along the Atlantic Coast from Massachusetts, south throughout the southern United States to South America.

STATUS: Abundant in the West and common in the East.

HABITAT: Found in a wide variety of habitats, but typically inhabits open country with low vegetation and with many scattered small, shallow bodies of water. Frequents lakes, rivers, marshes and ponds in grasslands, barrens, dry tundra, open boreal forest, and cultivated fields. Winters on freshwater and brackish coastal marshes, shallow lagoons, mudflats along rivers, and sheltered marine waters.

SPECIAL HABITAT REQUIREMENTS: Drakes need mudbanks or exposed water margins for resting; also shallow wetlands for feeding.

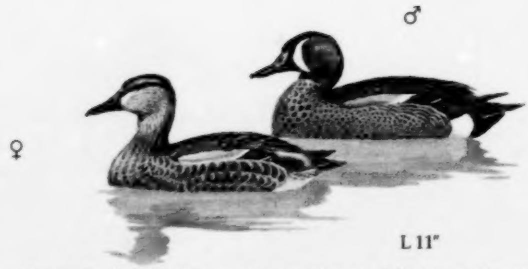
NEST: Often builds a nest in a hollow on dry ground, sometimes concealed by grasses or shrubs, usually within 300 feet (occasionally a half mile) from water. Nests in stubble fields, in a dry portion within a large marsh, or in lightly grazed pasture, but generally avoids timbered or extensively brushy areas.

FOOD: Prefers to feed in shallow waters of marshes, ponds, and wet meadows, or in grainfields. Primarily a seed-eater; mostly (87 percent) consumes vegetative diet, consisting of seeds of pondweeds, sedges, grasses, smartweeds, and cultivated grains; also takes some fairy shrimp, snails, earthworms, mollusks, crustaceans, dipteran larvae, and other insects.

REFERENCES: Bellrose 1976, DeGraff et al. 1980, Johnsgard 1975b, Krapu 1974, Palmer 1976a.

Blue-winged Teal

Anas discors



RANGE: Breeds from east-central Alaska and southern Mackenzie to southern Quebec and southwestern Newfoundland, south to northeastern California, east across to central Louisiana, central Tennessee and eastern North Carolina. Winters from southern California to western and southern Texas, the Gulf Coast and North Carolina on the Atlantic Coast south to South America.

STATUS: Common throughout range.

HABITAT: Prefers wetlands on rolling tallgrass prairie but is also found in mixed shortgrass prairie and boreal and deciduous forests. More of a shoreline inhabitant than one of open water, prefers calm water or sluggish currents to fast water. Uses rocks protruding above water, muskrat houses, trunks or limbs of fallen trees, or bare stretches of shoreline or mudflats as resting sites. Winters on shallow inland freshwater marshes and on brackish and saltwater marshes.

SPECIAL HABITAT REQUIREMENTS: Marshes, sloughs, ponds, lakes, and sluggish streams.

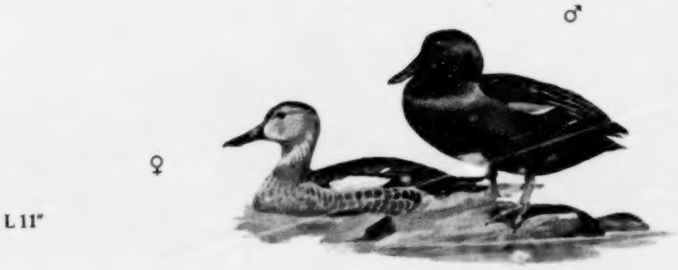
NEST: Builds nests on dry ground in dense grassy sites such as bluegrass, hayfields, and sedge meadows, where the vegetation ranges from 8 to 24 inches high at the onset of nesting, or under bushes, usually within several hundred yards of open water; occasionally on a sedge tussock or muskrat house, in slough grass, or in alfalfa fields. In good habitat nests communally.

FOOD: Prefers to feed on mud flats, in fields, or in shallow water where there is floating and shallowly submerged vegetation plus abundant small aquatic animal life. Consumes a diet that is 70 percent vegetative, consisting of seeds of sedges; grasses, pondweeds, and smartweeds; stems and leaves of aquatic plants; and snails, mollusks, crustaceans, and insects.

REFERENCES: Bellrose 1976, Bennet 1938, DeGraff et al. 1980, Johnsgard 1975b, Palmer 1976a.

Cinnamon Teal

Anas cyanoptera



RANGE: Breeds from southern British Columbia east to southwestern Saskatchewan (probably), and south into Mexico. Winters from central California, southern Nevada, central Utah, southeastern Arizona, southern New Mexico and central Texas south to South America.

STATUS: Common in the West.

HABITAT: Inhabits small, shallow wetlands, including areas with alkaline waters, but may also be found around larger and deeper lakes. Winters primarily on freshwaters, though occasionally found in marine habitats.

SPECIAL HABITAT REQUIREMENTS: Shallow lake margins, ponds bordered by tule and grasses, sloughs, marshes, sluggish streams, reservoirs, and irrigation ditches.

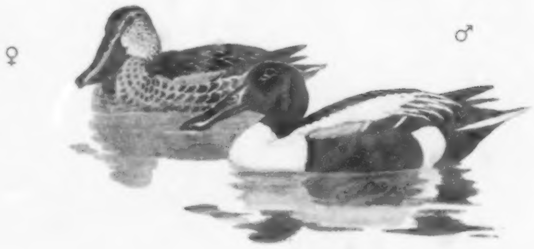
NEST: Nests on the ground in dense grasses under 2 feet high, in cattails or reeds near water, or in a hollow in the ground, often 100 feet or more from water. Broods may be moved as far as a mile from the nest site to good brood cover of lush emergent vegetation adjacent to water with abundant food.

FOOD: Feeds by tipping up in shallow water, grazes in grass and in fields, or probes in mud for its food, which is 80 percent vegetative. Primarily consumes seeds and vegetative parts of pondweeds, bulrushes, sedges, smartweeds and grasses; also takes mollusks and insects.

REFERENCES: Bellrose 1976, Grinnell and Miller 1944, Johnsgard 1975b, Low and Mansell 1983, Palmer 1976a, Verner and Boss 1980.

Northern Shoveler

Anas clypeata



L 14"

RANGE: Breeds from northern Alaska to northern Manitoba, south to northwestern and eastern Oregon, northern Utah, Colorado, Nebraska, and Missouri, and central Wisconsin. Winters from the coast of southern British Columbia to central Arizona east to the Gulf Coast and South Carolina on the Atlantic Coast south to South America.

STATUS: Fairly common; more abundant west of the Mississippi River.

HABITAT: Prefers shallow prairie marshes, particularly those with abundant plant and animal life floating on the surface, but also occupies potholes, sloughs, and marshes in taiga, forests, and (less commonly) cultivated country. It tolerates a wide range of water conditions, from clean and clear to muddy; flowing to stagnant; considerably alkaline, and even heavily polluted. Likes to have mudbanks or low sloping shorelines with short or flattened vegetation for loafing. Winters in freshwater and brackish habitats.

SPECIAL HABITAT REQUIREMENTS: Shallow waters with muddy bottoms, surrounded by dry grassy areas for nesting.

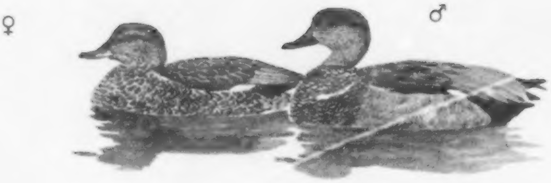
NEST: Nests on dry ground in a slight hollow, preferably in short grasses within 300 feet of water, but will nest in hayfields, meadows, and rarely bulrushes if grasses are not available. Seldom nests in weed patches, and avoids woody vegetation such as willows.

FOOD: A filter feeder; prefers to feed in shallow waters, but will actively feed in deep waters containing submergent and surface vegetation. Consumes a considerable amount of microscopic animal life such as ostracods, copepods, and similar crustaceans, and macroscopic animal life as well. Eats fingernail clams, mollusks, and insects for one qurter of the diet. Also eats grasses, sedges, water lilies, pondweeds, bulrush seeds, algae, and smartweeds.

REFERENCES: Bellrose 1976, DeGraff et al. 1980, Johnsgard 1975b, Palmer 1976a, Poston 1974.

Gadwall

Anas strepera



RANGE: Breeds from southern Alaska and southern Yukon to the New Brunswick-Nova Scotia border, south locally to southern California, northern Texas, central Minnesota, and northern Pennsylvania and on the Atlantic Coast to North Carolina. Winters from southern Alaska, southern British Columbia and Colorado to southern South Dakota, Iowa, the southern Great Lakes and Chesapeake Bay on the Atlantic Coast south to Mexico and the Gulf Coast.

STATUS: Uncommon, but numbers have increased substantially during the past 2 decades and the range is extending eastward.

HABITAT: Inhabits prairie marshes, sloughs, ponds or small lakes in grasslands in both freshwater and brackish habitats. Generally avoids wetlands bordered by woodlands or thick brush, preferring those bordered by dense, low herbaceous vegetation or shrubby willows and with grassy islands. Prefers to winter in freshwater, marshy habitats but can be found on open water of any kind.

SPECIAL HABITAT REQUIREMENTS: Shallow water for feeding; marshes or grassy areas near water for nesting.

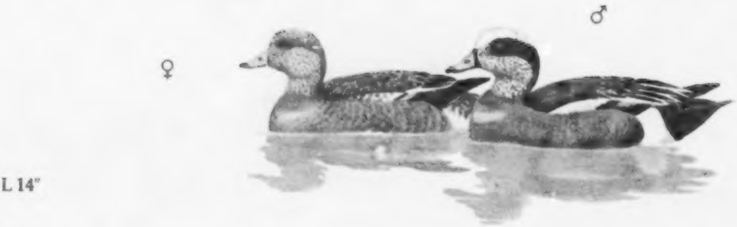
NEST: Nests on the ground on a well-drained site on islands in lakes, in upland meadows or pastures, in alfalfa fields, or on prairies, usually within 150 feet of water. Prefers to nest in uplands rather than over water, especially in dense, coarse herbaceous vegetation and under shrubby willows.

FOOD: Prefers to feed along shallow marsh edges with abundant aquatic plant life, but also feeds in open water more than other dabblers. Sometimes feeds in stubble fields for grain, or in woods for acorns. Consumes mainly leaves and stems of aquatic plants; also eats insects, mollusks, crustaceans, amphibians, and fishes.

REFERENCES: Bellrose 1976, DeGraff et al. 1980, Johnsgard 1975b, Palmer 1976a, Terres 1980

American Wigeon

Anas americana



RANGE: Breeds from central Alaska and central Yukon to New Brunswick and southern Nova Scotia, south to northeastern California, central Colorado, South Dakota, southern Ontario, and northern New York, sporadically to the Atlantic Coast. Winters from southern Alaska to southern Nevada, sporadically across the central United States to the southern Great Lakes and Ohio Valley, and on the Atlantic Coast from Nova Scotia south throughout the southern United States to Central America.

STATUS: Common.

HABITAT: Inhabits freshwater wetlands and lakes from tundra to shortgrass and mixed prairie, preferring permanent to temporary waters. Commonly associates with diving ducks, and in winter frequents coastal marshes and bays, wet meadows, and shallow freshwater and brackish ponds.

SPECIAL HABITAT REQUIREMENTS: Large lakes, ponds, marshes, sluggish streams and rivers, with open water and exposed shoreline.

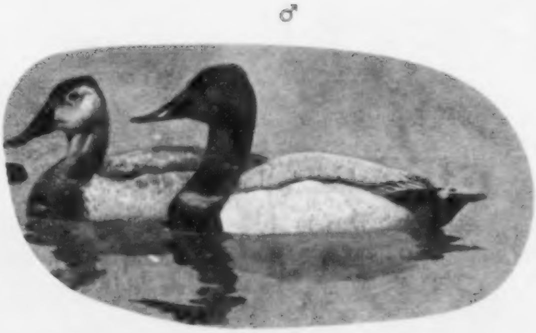
NEST: Nests in a hollow on dry ground on an island or on shore, in tall grasses or weeds, or at the base of a tree or bush, as far as 400 yards from water.

FOOD: Feeds by grazing and gleaning in wet or dry pastures and fields, by dabbling on the water surface in shallow water along marsh edges and sloughs, and by scavenging for wild celery after diving ducks have torn plants loose from bottom. Primarily vegetarian, eats mainly leaves, stems, and buds of aquatic plants; also feeds on waste grains, mollusks, crustaceans, and insects.

REFERENCES: Baldwin et al. 1964, Bellrose 1976, DeGraff et al. 1980, Johnsgard 1975b, Low and Mansell 1983, Palmer 1976a, Terres 1980, Verner and Boss 1980.

Canvasback

Aythya valisineria



RANGE: Breeds from central Alaska and northern Yukon to western Ontario and south to south-coastal Alaska; locally in inland areas to northeastern California across to northern Utah, central New Mexico, northwestern Iowa, and southern Ontario. Winters along the Pacific Coast from the central Aleutians and south-coastal Alaska south to Baja California, from Arizona and New Mexico to the Great Lakes, and, on the Atlantic Coast, from New England south to the Gulf Coast and Mexico.

STATUS: Locally common; numbers are declining due to loss of breeding habitat through drainage and drought.

HABITAT: Prefers shallow prairie marshes, 10 acres or less, or other permanent wetlands with stable water levels, bordered by cattails and bulrushes, with little, if any, wooded vegetation around the shoreline. Large lakes of 150 acres or more, marshes, and rivers with submerged beds of sago pondweed are favored during migration. Winters primarily on estuaries and sheltered bays, sometimes on deep, freshwater lakes, where wild celery and pondweeds thrive.

SPECIAL HABITAT REQUIREMENTS: Marshes, ponds, lakes, and rivers bordered by emergent vegetation and with enough open water for taking off and landing.

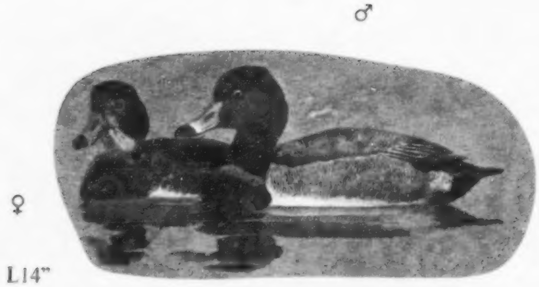
NEST: Usually nests over water 6 to 24 inches deep in bulrushes, reeds, or cattails, sometimes on a muskrat house, rarely on dry ground. Attaches nest to surrounding plants or built on a mat of floating dead plants, 3 to 60 feet from edge of open water.

FOOD: Dives in shallow water, usually 3 to 12 feet deep, for food, which is 80 percent vegetative material. In the Northeast, prefers seeds and vegetative parts of wild celery; in the Southeast and the West, primarily consumes pondweeds; also feeds on water plantains, grasses, sedges, mollusks, and insects.

REFERENCES: Bellrose 1976, DeGraff et al. 1980, Evans and Bartels 1981, Johnsgard 1975b, Palmer 1976b, Stoudt 1982, Terres 1980.

Redhead

Aythya americana



RANGE: Breeds from central British Columbia and southwestern Mackenzie to northwestern and central Minnesota, south to southern California, the Texas Panhandle and northern Iowa; locally in south-central and southeastern Alaska, and sporadically in eastern North America. Winters from British Columbia on the Pacific Coast, in the interior from Nevada to the middle Mississippi and Ohio Valleys and the Great Lakes, and from New England on the Atlantic Coast south throughout the southern United States to Mexico.

STATUS: Common; population declining in the eastern United States.

HABITAT: Inhabits freshwater marshes, sloughs, ponds, and shallow lakes bordered by hardstem bulrush, cattails, reeds, or sedges in prairies and intermountain parks. Winters primarily on freshwater and brackish lakes, rivers, and estuaries, in areas well protected from heavy wave action.

SPECIAL HABITAT REQUIREMENTS: Wetlands at least 1/2 acre in size bordered by permanent, dense emergent vegetation, with stable water levels during the nesting season.

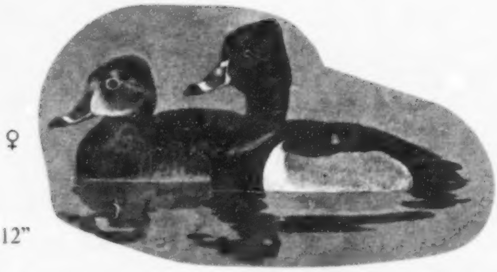
NEST: Usually nests in emergent vegetation or on a floating mat of dead plant material over shallow water 6 to 14 inches deep, fairly close to shore, but occasionally on dry ground or over water 4 feet deep. Tends to be semi-parasitic, sometimes laying eggs in nests of other waterfowl, especially the canvasback; also incubates own nests. Prefers to rear broods in potholes at least 1 acre in size, with deeper waters than those used for nesting.

FOOD: Feeds in marshes, sloughs, and ponds more than other diving ducks, mainly in water less than 6 feet deep. Has a diet that is 90 percent vegetative, consisting primarily of seeds and vegetative parts of aquatic plants and including some insects and shellfish.

REFERENCES: Bellrose 1976, DeGraff et al. 1980, Johnsgard 1975b, Lokemoen 1966, Palmer 1976b, Tate and Tate 1982, Weller 1964.

Ring-necked Duck

Aythya collaris



RANGE: Breeds in east-central and southeastern Alaska, and from central British Columbia and northwestern and southern Mackenzie to Newfoundland and Nova Scotia, south to northeastern California, southeastern Arizona, northern Illinois, and Massachusetts. Winters on the Pacific Coast from southeastern Alaska, in the interior from southern Nevada to the lower Mississippi and Ohio Valleys, and on the Atlantic Coast from New England south through the southern United States to Panama.

STATUS: Common.

HABITAT: Inhabits shallow, dense bogs, swamps, and marshes, especially those with sweetgale or leatherleaf cover, from 1 to 2,000 acres in size, typically having a pH range of 5.5 to 6.8, and preferably near or in woodlands. It also uses small potholes, sloughs, and beaver flowages near larger wooded lakes or rivers with submerged and emergent vegetation. Winters on fresh or brackish marshes, lakes, and estuaries, rarely on strictly saline waters.

SPECIAL HABITAT REQUIREMENTS: Wetlands with an expanse of open water.

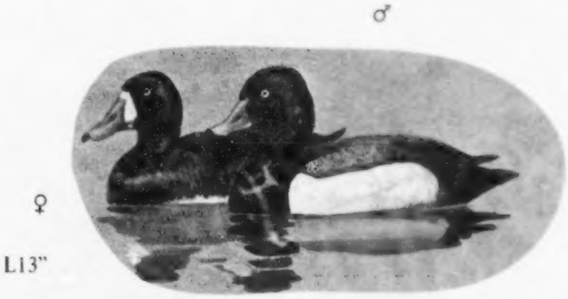
NEST: Nests on floating mats of vegetation, among hummocks, in clumps of marsh vegetation or on islands, on relatively dry sites usually within a few feet of water; seldom in emergent vegetation over water.

FOOD: Prefers to feed in shallow water, usually less than 6 feet deep. Consumes a diet that is 80 percent vegetative, consisting mostly of a few plant groups; seeds, bulbs, and succulent parts of waterlilies, pondweeds, sedges, grasses, and smartweeds. Also consumes some aquatic insects and mollusks.

REFERENCES: Bellrose 1976, DeGraff et al. 1980, Johnsgard 1975b, Mendall 1958, Palmer 1976b.

Greater Scaup

Aythya marila



RANGE: Breeds from western Alaska to southern Keewatin, around Hudson and James Bays, and northern Quebec: casually or irregularly south to southeastern Alaska, northwestern British Columbia, central Manitoba, and southeastern Michigan. Winters along the Pacific Coast from the Aleutians and southeastern Alaska south to Baja California, in the eastern Great Lakes, from the Ohio and lower Mississippi Valleys south to the Gulf Coast, and on the Atlantic Coast from Newfoundland south to Florida.

STATUS: Locally common.

HABITAT: Inhabits lakes, ponds, and marshes from forested tundra to richly vegetated low tundra. During the breeding season, drakes rest along shorelines or on shoals, while in late fall and winter, both sexes form large rafts in open water, even in the open ocean well beyond the breakers. Winters on brackish and saltwater bays and estuaries, less commonly on large inland waters.

SPECIAL HABITAT REQUIREMENTS: Scattered wetlands in forested to open tundra.

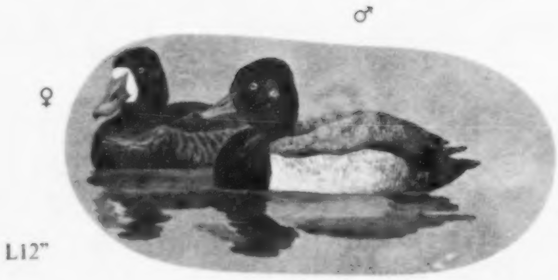
NEST: Nests on the ground in a slightly elevated spot, in grasses on the tundra, usually near the shores of lakes or ponds, but up to 3,000 feet from water. Sometimes nests on islands, in marshes, or above or in water among rushes or wild rice.

FOOD: An expert diver; dives to depths of at least 20 feet, remaining underwater seeking food for up to a minute. A saltwater bird most of the year; prefers to feed in shoals with water less than 20 feet deep or in shellfish beds, also in freshwater lakes and ponds. Consumes a diet that is about half vegetative and half animal, including snails, aquatic insects, tadpoles, small fishes, and seeds in summer. During winter, also eats mollusks, crabs, barnacles, and other crustaceans. Also feeds on muskgrass, sea lettuce, eelgrass, wild celery, and widgeon grass.

REFERENCES: Cottam 1939, Johnsgard 1975b, Palmer 1976b, Terres 1980, Vickery in Farrand 1983a.

Lesser Scaup

Aythya affinis



RANGE: Breeds from central Alaska to northern Manitoba and western Ontario, south to southern interior British Columbia, northern Wyoming and northwestern and central Minnesota; casually or irregularly east to southern Ontario and west-central Quebec, and south to northeastern California and Colorado, northern Illinois and northern Ohio. Winters from southern Alaska and southern British Columbia and Utah to the southern Great Lakes Region and New England, south throughout the southern United States to South America.

STATUS: Abundant.

HABITAT: Inhabits grass-margined wetlands in prairie and forested habitats, with the largest breeding concentrations found in marshes of hardstem bulrush bordering lakes. Winters on sheltered bays, estuaries, coastal marshes, and freshwater lakes, preferring a more sheltered habitat than the greater scaup.

SPECIAL HABITAT REQUIREMENTS: Lakes, ponds, potholes, marshes, and sloughs bordered by grasses.

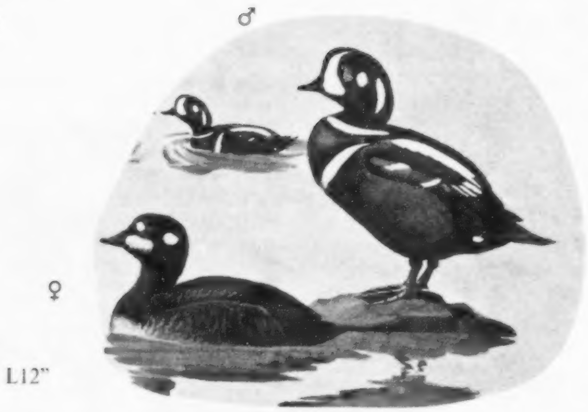
NEST: Usually nests in upland areas adjacent to water but also on islands, in wet meadows, in shallows at edges of bays and sloughs among bulrushes or on tussocks in marshes. Conceals nest well in hollows on usually dry ground, in grasses, nettles, low brush, even under driftwood.

FOOD: An expert diver, generally feeds in water 5 to 6 feet deep, but may feed to depths of 15 to 20 feet. Consumes plant and animal foods about equally, including seeds and vegetative parts of pondweeds, grasses, sedges, widgeon grass, wild rice, bulrushes, snails and other mollusks, crustaceans, and aquatic insects.

REFERENCES: Bellrose 1976, Johnsgard 1975b, Palmer 1976b, Terres 1980.

Harlequin Duck

Histrionicus histrionicus



RANGE: Breeds in western North America from western Alaska and northern Yukon south to Vancouver Island, eastern Oregon and western Wyoming; in the Sierra Nevada of California, and in eastern North America from southern Baffin Island south to central and eastern Quebec and eastern Labrador. Winters along the Pacific Coast from the Pribilof and Aleutian Islands south to central California; on the Atlantic Coast from southern Labrador south to New York (rarely to South Carolina); casually farther inland south to Kansas and West Virginia and Florida.

STATUS: Uncommon to locally abundant.

HABITAT: Prefers cold, shallow, rapidly flowing mountain streams in forested regions, but also inhabits ponds and lakes, along rocky Arctic shores, and in tundra. Loafs in shallows, or on a rock or log in a stream or ashore. Winters on marine waters, usually 6 to 12 feet deep, in heavy surf along rocky coasts.

SPECIAL HABITAT REQUIREMENTS: Shallow, swift streams or rivers, or pothole glacial lakes.

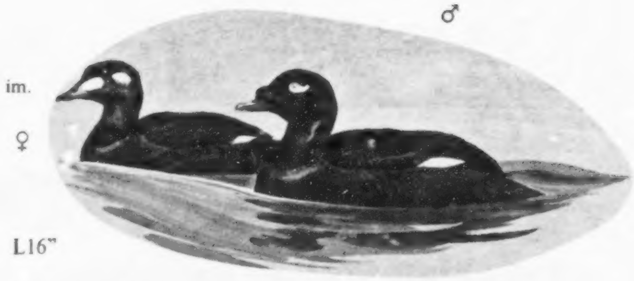
NEST: Nests on the ground on an island, in a recess in a stream bank, under bushes or trees, or occasionally in a hollow tree or a cavity among rocks. Usually nests within 6 feet (but sometimes up to 60 feet) from water, with overhead shelter.

FOOD: A proficient diver, seems to prefer to feed in rough waters broken by rocks and surf. Mostly (98 percent) consumes crustaceans and mollusks. Also eats stone flies and other insects, fishes, and echinoderms.

REFERENCES: Bellrose 1976, Cottam 1939, Johnsgard 1975b, Palmer 1976b, Terres 1980.

White-winged Scoter

Melanitta fusca



RANGE: Breeds from northern Alaska to southern Keewatin and northern Manitoba south to central Alaska, northeastern Washington, southern Saskatchewan, northern North Dakota and northern Ontario; possibly farther east. Winters on the Pacific Coast from the Aleutians south to Baja California, on the Great Lakes, and on the Atlantic Coast from Newfoundland south to South Carolina.

STATUS: Common to locally abundant.

HABITAT: Inhabits waters on open tundra or prairie with dense, low ground cover, preferably lakes larger than 110 acres, 3 to 12 feet deep and with dense submergent vegetation. Uses mixed tundra-taiga less frequently during nesting. In other seasons, can be found on marine and brackish waters along the coasts where the water is shallow over shellfish beds and the bottom is hard and sandy or gravelly, and occasionally on open freshwater.

SPECIAL HABITAT REQUIREMENTS: Lakes, ponds, and sluggish streams in northern prairie or tundra.

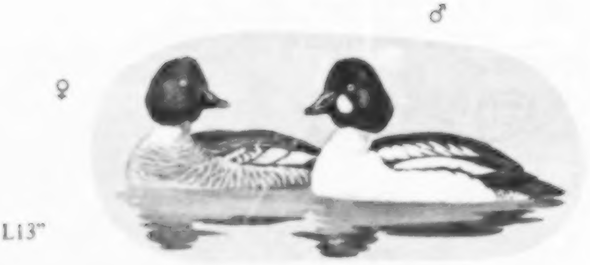
NEST: Nests in a hollow on the ground under dense, low spreading shrubs, preferably gooseberry, snowberry, rose, and raspberry, usually close to water, occasionally up to 450 feet and rarely a half mile away. May nest on islands, commonly uses old nest bowls, and in some instances may occupy active blue-winged teal or gadwall nests. Easily disturbed by human interference such as recreational boating on breeding lakes. Broods are reared in shallow, open water areas with submergent vegetation and some protection from wave action.

FOOD: Prefers to dive for shellfish in shallow water, usually less than 6 feet deep. Primarily eats animal foods (90 percent), mostly mollusks; also eats crabs, some fishes, aquatic insects, and sea lettuce.

REFERENCES: Brown and Brown 1981, Grosz and Yocom 1972, Palmer 1976b.

Common Goldeneye

Bucephala clangula



RANGE: Breeds from western Alaska and northern Yukon to central Labrador and Newfoundland, south to central Alaska, northern Washington across to northern Michigan, Maine, New Brunswick, and Nova Scotia. Winters on the Pacific Coast from the Aleutian Islands south to southern California, on the Great Lakes, in the Mississippi and Ohio Valleys, and south to the Gulf Coast, and on the Atlantic Coast from Newfoundland south to Florida; irregularly elsewhere in the interior of the United States.

STATUS: Common.

HABITAT: Inhabits lakes, ponds, shallow rivers, slow-flowing streams, floodplain forests and bogs, preferably with weedy margins, near or in woodlands with large cavity trees. Breeds in a range that generally coincides with the boreal coniferous forest. Winters on bays, estuaries, rivers, and inland as far north as open water and food are available.

SPECIAL HABITAT REQUIREMENTS: Large trees (minimum dbh of 20 inches) with cavities for nesting, near clear, cold, shallow water for feeding.

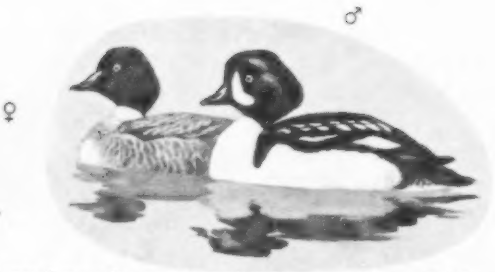
NEST: Nests in tree cavities near or in water, preferably open-top, bucket cavities, but also in old pileated woodpecker cavities, in hollow stumps, in natural cavities, or when cavities are not available, in abandoned buildings, cavities among rocks, and nest boxes. Sometimes may lay joint clutches when cavities are scarce. Prefers nest tree entrances that are 6 to 40 feet above ground or water. Accepts nest boxes that are 9 by 9 by 24 inches in size, with an elliptical entrance 3 1/2 by 4 1/2 inches.

FOOD: Prefers to dive for food in water 3 to 12 feet deep. Consumes animal food, as 75 percent of the diet, including crabs, crayfish, mussels, snails, insects, and some fishes. Also eats seeds, tubers, and leafy parts of pondweeds; seeds of pond lilies and bulrushes; and wild celery.

REFERENCES: Carter 1958, Cottam 1939, DeGraff et al. 1980, Johnsgard 1975b, Palmer 1976b, Thomas et al. 1979.

Barrow's Goldeneye

Bucephala islandica



RANGE: Breeds from central and southwestern Alaska, southern Yukon and southwestern Alberta south to south-coastal and southeastern Alaska, southern British Columbia, and northern Washington; locally at higher elevations to northwestern Wyoming, and in northeastern Quebec and northern Labrador. Winters along the Pacific Coast from south-coastal and southeastern Alaska south to central California; locally in the interior of western North America; and in the Atlantic region from the upper St. Lawrence drainage and Nova Scotia south to New York, rarely to South Carolina.

STATUS: Uncommon.

HABITAT: Inhabits lakes and ponds larger than 2 acres in montane, tundra, and subtundra habitats. Prefers moderately alkaline lakes, 5 to 15 feet deep, with a dense growth of submerged aquatic vegetation such as pondweeds and widgeon grass, and bordered by dense stands of bulrushes. Winters on lakes and rivers, and in coastal estuaries and bays where rocky reefs and ledges in shallow water provide feeding grounds.

SPECIAL HABITAT REQUIREMENTS: Cavities in trees near open water.

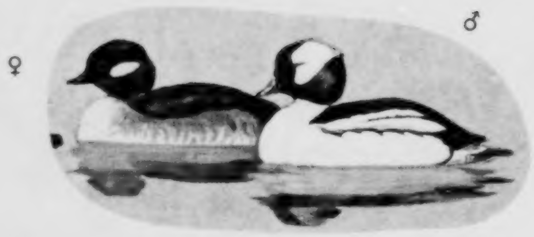
NEST: Nests in natural cavities in trees and stumps, in abandoned flicker nest cavities enlarged by natural decay, pileated woodpecker holes, or nest boxes, preferably within 100 feet of water. Occasionally may nest up to a half mile from water. Nests in dead or dying Douglas-fir, aspen, cottonwoods, lodgepole pine, ponderosa pine, and less commonly scrub pine. If tree cavities are not available, nests in holes in the ground or in cavities in rock cliffs or under rocks.

FOOD: Dives and forages in open water to depths of 3 to 10 feet for its food, which is 78 percent animal material. Primarily consumes insect nymphs and larvae, and water boatmen; crustaceans, especially crayfish; and some fishes, blue mussels, pondweeds, and wild celery.

REFERENCES: Cottam 1939, Bellrose 1976, Johnsgard 1975b, Palmer 1976b, Terres 1980.

Bufflehead

Bucephala albeola



RANGE: Breeds from central Alaska to northeastern Manitoba and northern Ontario south to northern Washington, southern Manitoba and locally in southern Ontario; also locally south to the mountains of northern California, and to Wyoming, Iowa, and Wisconsin. Winters from the Aleutian Islands on the Pacific Coast, the Great Lakes, and Newfoundland on the Atlantic, south in coastal states and the Ohio and Mississippi Valleys to the southern United States and Mexico.

STATUS: Common.

HABITAT: Primarily inhabits small, shallow, fresh or slightly alkaline lakes and ponds, preferably without broad margins of emergent or floating aquatic vegetation, in mixed coniferous-deciduous woodlands north and west of the Great Plains. Logs, stumps, rocks, open shore, and sometimes fence rails near water are used for resting and loafing. Winters in sheltered marine habitats, or on brackish or freshwater.

SPECIAL HABITAT REQUIREMENTS: Tree cavities excavated by woodpeckers, especially northern flickers, near shallow, fertile waters in forested regions.

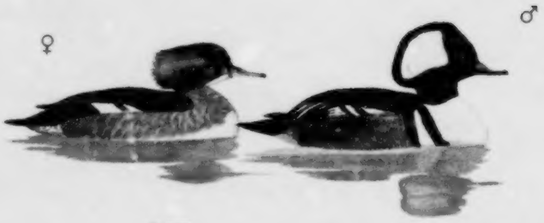
NEST: Prefers to nest in aspen trees near water containing unaltered northern flicker holes, but will also use pileated woodpecker holes. Also nests in Douglas-fir, balsam poplar, black cottonwood, ponderosa pine, and a few other coniferous and deciduous trees. Nests generally within 75 feet of water and rarely in dense forest. In some areas, accepts nest boxes 7 inches in diameter and 16 inches deep with entrances 2 7/8 inches wide.

FOOD: Prefers to forage in shallow water, diving to depths of 6 to 10 feet for food which is primarily animal material. In summer, mostly eats aquatic insects and larvae, but also includes water boatmen, shrimplike amphipods, some snails and small fishes, and seeds of pondweeds and naiads. During winter, mostly eats shrimp, snails, and other crustaceans.

REFERENCES: Erskine 1971, Johnsgard 1975b, Palmer 1976b, Terres 1980.

Hooded Merganser

Lophodytes cucullatus



L 13"

RANGE: Breeds from southern Alaska to Nova Scotia, south to Oregon and Idaho, east to Maine and Massachusetts, and locally in the Mississippi Valley and southeastern United States. Winters on freshwater from British Columbia and New England south to California, Texas, Florida, and northern Mexico.

STATUS: Locally common or rare.

HABITAT: Inhabits wooded, clear freshwater habitats, preferably water with sandy, gravelly, or cobbled bottoms. Prefers fast-flowing water, but also uses standing water as long as it is clear, small fish and invertebrates are abundant, and nest sites are available. Easily disturbed and thus tends to avoid areas of human activity. In Wisconsin, brood habitat was described as rivers with high levels of food resources, fast current velocities (0.80 to 0.93 feet/second), and wide (40 to 60 feet) and moderately deep (1 to 2 feet) channels with cobbled bottoms and heavy surrounding cover of mixed hardwoods.

SPECIAL HABITAT REQUIREMENTS: Wooded, clear water streams, rivers, swamps, ponds, and lakes with cavity trees.

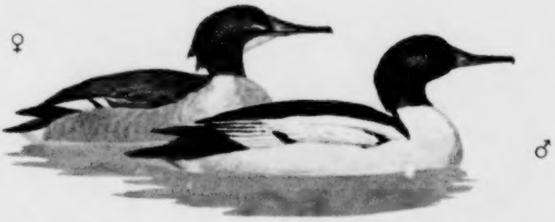
NEST: A cavity nester that uses almost any hole or hollow tree, at any height, as long as it is large enough for the female and her nest. The nest tree is usually within a few yards of, or standing in, water. Prefers flooded shoreline with standing trees, and with snags or stumps interspersed but will nest in other locations, including nest boxes.

FOOD: Captures food during short dives in shallow, often rapidly flowing water, or at water surface. Eats small fishes (mainly rough fish), crayfish and other crustaceans, many aquatic insects such as caddis fly larvae and dragonfly nymphs, also some seeds and parts of aquatic plants.

REFERENCES: Bellrose 1976, Johnsgard 1975b, Kitchen and Hunt 1969, Morse et al. 1969, Palmer 1976b, Terres 1980, Vickery in Farrand 1983a.

Common Merganser

Mergus merganser



RANGE: Breeds in North America from central and south-coastal Alaska, northern Saskatchewan, and Newfoundland south to the mountains of central California and northern New Mexico. East of the Rockies, breeds south to southern Saskatchewan, central Michigan, southern Maine, and west-central Nova Scotia. Winters from the Aleutian Islands and south-coastal Alaska east across southern Canada to Newfoundland and south to southern California and the Gulf Coast from southern Texas to central Florida. Winters as far north as open inland waters are available.

STATUS: Common throughout range.

HABITAT: Prefers to breed in ponds associated with upper portions of rivers in forested regions, and clear, freshwater lakes with forested shorelines. Is transcontinental in character, but essentially confined to forested regions.

SPECIAL HABITAT REQUIREMENTS: Clear, forested streams, rivers, and lakes with tree cavities.

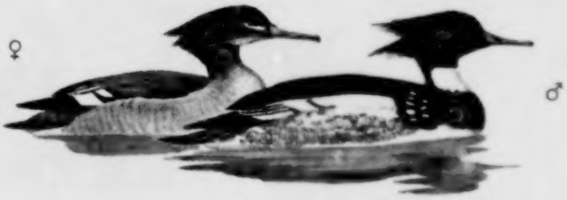
NEST: Generally nests in cavities in hollow trees near water, but also in dark recesses, on the ground, or in nest boxes. Height of tree cavity and species of tree are unimportant, but the number of suitable cavities available is definitely limited. May nest beneath boulders, in root tangles along undercut streambanks, in crevices in cliffs, or in chimneys, as long as the nest is concealed from above. One pair may use 2 to 3 miles of river during nesting.

FOOD: An opportunistic forager, generally feeds in fairly shallow waters from 1 1/2 to 6 feet deep. Consumes a wide variety of fishes, primarily rough and forage fish, but may be detrimental in areas specifically managed for trout or salmon production. Also eats frogs, aquatic salamanders, crayfish, shrimp, and other small crustaceans, snails and other mollusks, leeches, worms, aquatic insects and their larvae, and the roots and stems of aquatic plants.

REFERENCES: Bellrose 1976, Johnsgard 1975b, Palmer 1976b, Terres 1980, Timken and Anderson 1969.

Red-breasted Merganser

Mergus serrator



RANGE: Breeds from northern Alaska to central Keewatin, northern Baffin Island, Labrador and Newfoundland south to the Aleutian Islands, northern British Columbia, central Minnesota, northern New York and Nova Scotia, casually south along the Atlantic Coast to Long Island. Winters primarily along coasts and on large inland bodies of water from southern Alaska, the Great Lakes and Nova Scotia south to Baja California, southern Texas, and the Gulf Coast.

STATUS: Common.

HABITAT: Prefers to breed on small islands or islets with low, prostrate woody vegetation or other natural features to cover the nest, and with open shores, gravel bars, or rocks to provide roosting and preening areas for drakes and young. Although it prefers inland waters, it may be found along the coasts on shores and on marine islets. Winters mainly in estuaries and sheltered bays, less frequently on inland freshwater.

SPECIAL HABITAT REQUIREMENTS: Rivers, ponds, and lakes with some overhead cover nearby for nesting.

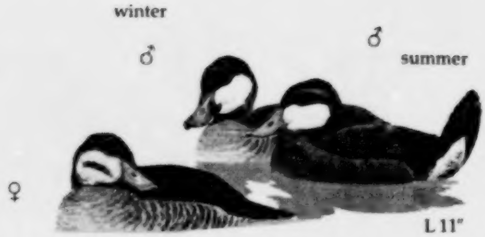
NEST: Nests on the ground under low cover, generally within 33 feet of water, preferably on islands, but also on riverbanks and lakeshores, in marshes, on rocky islets, or in bank recesses. Nests may be under low conifer boughs; under or between boulders in shallow cavities; in tall grass, heather, or bracken; or under driftwood.

FOOD: Feeds primarily on fish caught during dives underwater. Also eats fish eggs, frogs, annelids, nymphs, caddis flies, amphipods, crabs, prawns, and mollusks.

REFERENCES: Bellrose 1976, Clapp et al. 1982, Johnsgard 1975b, Palmer 1976b.

Ruddy Duck

Oxyura jamaicensis



RANGE: Breeds in east-central Alaska and from central and northeastern British Columbia to western Ontario and south to southern California, western and southern Texas, and southwestern Louisiana, with some scattered breeding east to Nova Scotia and south to Florida. Winters from southern British Columbia, Idaho, Colorado, Kansas, the Great Lakes, and on the Atlantic Coast from Massachusetts south throughout the southern United States to Mexico.

STATUS: Common.

HABITAT: Inhabits permanent freshwater and alkaline prairie marshes having dense stands of cattails, bulrushes, whitetop, and reeds, and relatively stable water levels. Both large and small marshes are used for nesting, from potholes less than one acre to 1,200-acre sloughs. Commonly loafs and rests on water well out from shore. Prefers large bodies of shallow freshwater and brackish water, especially those with areas of aquatic plant growth, during migration. Winters on ice-free inland waters, or on sheltered shallow brackish or saltwater coastal waters.

SPECIAL HABITAT REQUIREMENTS: Open water areas close to dense emergent vegetation with muskrat channels or natural passageways to allow movement between the nest site and open water.

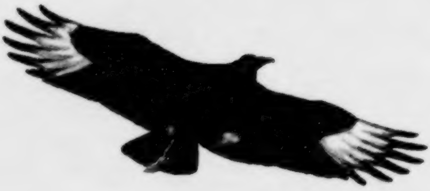
NEST: Usually nests over shallow water in emergent vegetation, on a floating mat of vegetation, or on a platform built up from the floor of the marsh. Occasionally nests on a muskrat house, on floating logs, or on an old coot nest. "Dump" nests are common in marshes with fluctuating water levels.

FOOD: Dives for food in waters 2 to 10 feet deep, and occasionally feeds on the water surface. Consumes about 72 percent plant foods, consisting of seeds, tubers, leaves, and algae. Also eats insects, snails, and some crustaceans.

REFERENCES: Bellrose 1976, Clapp et al. 1982, Cottam 1939, DeGraff et al. 1980, Johnsgard 1975b, Joyner 1969, Palmer 1976b, Siegfried 1976.

Black Vulture

Coragyps atratus



L 22" W 54"

RANGE: Resident from southern Arizona and western Texas to southern Illinois, southern Indiana and New Jersey south to the Gulf Coast, southern Florida, and South America. May retreat from northern range limits in winter.

STATUS: Common, but the population is declining in the southern Atlantic Coast region; range is extending slightly northward.

HABITAT: Nearly ubiquitous except in heavily forested regions. It is found in the southern Great Plains, southeastern pine forests, oak-hickory forests, and intermediate oak-pine forests.

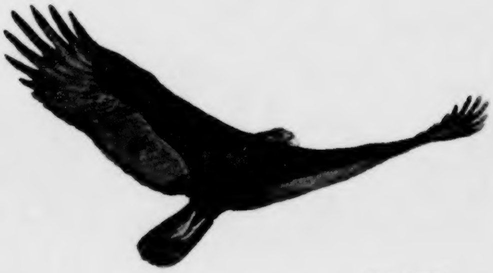
NEST: Does not construct a nest. Frequently lays eggs in hollow bases of trees or stumps, rarely more then 10 to 15 feet above ground, but also on the ground, under dense or thorny vegetation, in cavities of rocks, on the floor of caves, on cliff ledges, or in abandoned buildings.

FOOD: Feeds primarily on carrion from city dumps, sewers, slaughterhouses, and roadkills along highways. Also kills and eats baby herons, domestic ducks, newborn calves, baby lambs, skunks, and opposums; feeds at times on ripe and rotten fruit and vegetables.

REFERENCES: Armistead in Farrand 1983a, Brown and Amadon 1968, Harrison 1979, Heintzelman 1979, Scott et al. 1977, Tate and Tate 1982, Terres 1980.

Turkey Vulture

Cathartes aura



L 25" W 72"

RANGE: Breeds from southern British Columbia, western Ontario, extreme southern Ontario and Massachusetts south throughout the remaining continental United States to South America. Winters from northern California, Arizona, Texas, Nebraska, the Ohio Valley, and Pennsylvania south to the Gulf Coast, Florida, and South America.

STATUS: Common.

HABITAT: Uses a wide variety of habitats, from the tropics and forested habitats dominated by mixed or deciduous trees to open plains and deserts, and from lowlands to mountains. Preens and roosts in tall snags or trees with open branches. May gather in groups of up to 70 birds to roost at night.

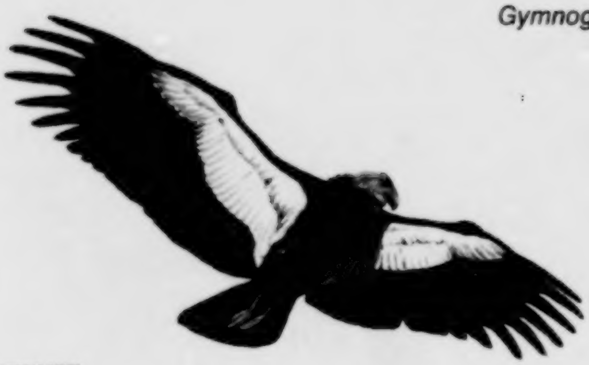
NEST: Does not build a nest. Lays eggs on the floor of caves (preferably one which has 2 entrances), on the ground inside dense shrubs, in hollow logs or stumps, on rocky outcrops or ledges, in swamps, in hollow snags, in old hawk nests, or on the floor in abandoned buildings. The eggs are usually well-hidden from view and inaccessible to predators.

FOOD: Feeds almost entirely on carrion in any state, from fresh to putrid, sighted while soaring over open fields, ridges, roads, or any type of clearing. Although partial to carrion of small mammals, amphibians, reptiles, birds, and fish, will consume carrion of large animals. Gathers quickly after the death of an animal to feed.

REFERENCES: Brown and Amadon 1968, DeGraff et al. 1980, Grinnell and Miller 1944, Heintzelman 1979, Sprunt 1955, Terres 1980.

California Condor

Gymnogyps californianus



L 45" W 120"

RANGE: Coastal ranges of California from Monterey and San Benito Counties south to Ventura County, ranging, at least casually, north to Santa Clara and San Mateo Counties, and east to the western slope of the Sierra Nevada and the Tehachapi Mountains, with breeding sites apparently confined to Los Padres National Forest in Santa Barbara, Ventura, and extreme northern Los Angeles Counties.

STATUS: Endangered. All known individuals are now in captivity.

HABITAT: Inhabited rugged canyons, gorges and forested mountains of southern California mainly between 985 and 8,860 feet in elevation; nested primarily between 2,000 to 4,500 feet in elevation. Spent a great deal of time roosting, preferably on dead conifers 40 to 70 feet tall, but also in live conifers and on cliffs. Needed a long, unobstructed space for taking off downhill from the roost site, which was located in areas protected from the wind, and near food, water, and nest sites.

SPECIAL HABITAT REQUIREMENTS: Tall conifers or cliffs for roosting, open grasslands for feeding, cliffs for nesting, and freedom from human disturbance.

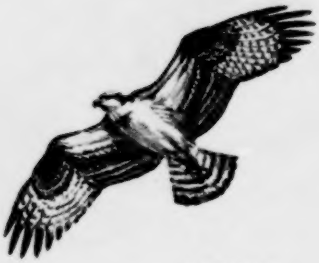
NEST: Nesting areas were characterized by extremely steep, rugged terrain, with dense brush and groves of Douglas-fir surrounding high sandstone cliffs. Nested in a cavity in rock or among boulders on cliffs, with space enough to hold 2 full-grown condors, with perches available for both young and adults, protection from the elements, and space below for taking off.

FOOD: Fed in open grassland because of its need for space for taking flight. Sighted food while soaring over the countryside; 95 percent of diet was carcasses of cattle, sheep, ground squirrels, deer, and horses in any state of decay. Preferred to drink water from clear pools at the tops of waterfalls, but when pressed would obtain water from any source.

REFERENCES: Koford 1953, Mackenzie 1977, Wilbur 1978.

Osprey

Pandion haliaetus



L 22" W 54"

RANGE: Breeds fron northwestern Alaska and northern Yukon to central Labrador and Newfoundland south locally to Baja California, central Arizona, southern Texas, the Gulf Coast, and southern Florida. Winters from central California, southern Texas, the Gulf Coast and Florida south to South America.

STATUS: Locally common to uncommon; population declining due to destruction of habitat, pesticides, human disturbance, and reduction of food resources.

HABITAT: Nearly cosmopolitan distribution, occurring on every continent except Antarctica. Occupies a wide range of habitats in association with water, primarily near lakes, rivers, and along coastal waters with adequate supplies of fish.

SPECIAL HABITAT REQUIREMENTS: Elevated nest sites near water with rich fish resources.

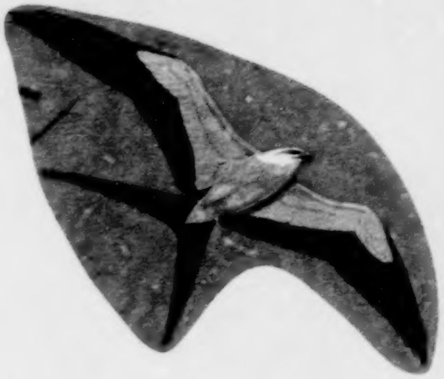
NEST: Nests in loose colonies or singly, and uses a wide variety of structures to support large stick nests, which may be 60 feet or more above ground. Prefers a snag in or near water, with a broken top or side limbs able to support the nest. Prefers tall snags that provide good visibility and security. Also nests on pilings, utility poles, duck blinds, buildings, steel towers for transmission lines, windmills, channel markers, fences, a wide variety of living, partially dead, or dead trees, wooden platforms in marshes, on cliffs, and sometimes on the ground. Nest site may be used by the same pair year after year.

FOOD: Feeds almost exclusively on fish; flies 50 to 100 feet above (preferably shallow) water, then hovers and plunges into the water to catch fish. Also eats frogs, snakes, ducks, crows, night-herons, and small mammals.

REFERENCES: DeGraff et al. 1980, Heintzelman 1979, Sprunt 1955, Zarn 1974a.

American Swallow-tailed Kite

Elanoides forficatus
(formerly Swallow-tailed Kite)



L21"

RANGE: Breeds locally from South Carolina south to Florida, and west to Louisiana; occasionally to Great Lakes and New England and also Central and South America. Winters in South America.

STATUS: Locally common.

HABITAT: Inhabits open river bottom forests with adjacent semi-prairie land, freshwater marshes bordering large lakes, lowland cypress swamps, and pine glades.

SPECIAL HABITAT REQUIREMENTS: Very tall living trees for nesting.

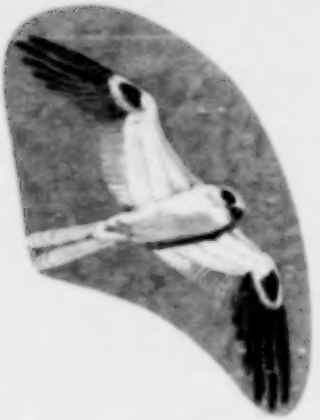
NEST: Nests in the very tops of tall, slender living trees, usually 60 to 100 feet above ground, but up to 200 feet high. In Florida, usually nests in pines or in black mangroves. Selects trees in open, thinly wooded areas, or along the edge of trails or openings so the birds can approach the nest unimpeded. Other kites are tolerated near the nest, but not other hawks or eagles.

FOOD: Feeds entirely on the wing, primarily on flying insects, but also sweeps low over fields, forest canopies, and prairies to catch grasshoppers, crickets, cicadas, small snakes, lizards, and frogs. Also snatches young birds and eggs, and drinks while skimming the surface of a lake or pond.

REFERENCES: Brown and Amadon 1968, Heintzelman 1979, Oberholser 1974a, Terres 1980.

Black-shouldered Kite

Elanus caeruleus
(formerly White-tailed Kite)



L14"

RANGE: Resident locally from northwestern Oregon south (west of the deserts) to Baja California, and from southern Oklahoma, western Louisiana, east-central and southeastern Texas south to South America. Strays to adjacent states, also to Florida, and in the Mississippi Valley north to Missouri and southern Illinois.

STATUS: Rare to locally fairly common; once reduced in numbers almost to the point of extinction in the United States. Year-round irrigation of agricultural land has improved habitat conditions in recent years.

HABITAT: Inhabits open country around freshwater marshes, moist meadows, alfalfa fields, and cultivated bottomlands, with scattered clumps of trees. In the western Sierra Nevada in California, found below 1,000 feet in blue oak-savannah, digger pine-oak, and riparian deciduous types.

SPECIAL HABITAT REQUIREMENTS: Trees with dense canopies for nesting near a permanent water source and an abundant population of voles (Microtus spp.).

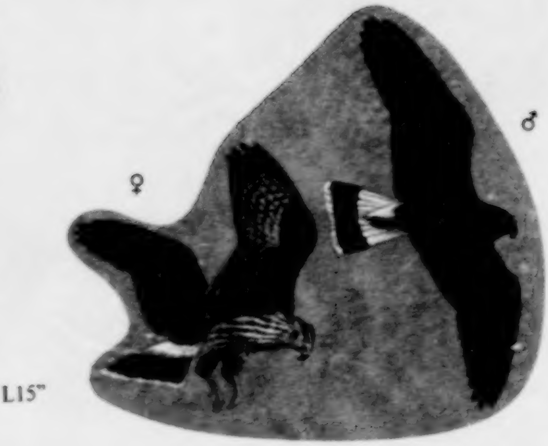
NEST: Nests in oak, willow, eucalyptus, cottonwood, or other hardwood trees, from 18 to 59 feet above ground, usually near a marsh, streambank, or canal, and areas where voles are abundant. With good vole populations, breeding pairs need a minimum of 20 acres around the nest site for hunting.

FOOD: Searches for food by flying and hovering at less than 100 feet above ground. Feeds primarily on voles, but also eats other small mammals, small snakes, lizards, frogs, and large insects such as grasshoppers, beetles, and crickets.

REFERENCES: Brown and Amadon 1968, Heintzelman 1979, Oberholser 1974a, Terres 1980, Verner and Boss 1980.

Snail Kite

Rostrhamus sociabilis
(formerly Everglade Kite)



RANGE: Resident in southern Florida, primarily at Lake Okeechobee and Loxahatchee National Wildlife Refuge, and locally throughout the Everglades basin and the upper St. John's River.

STATUS: Endangered due to habitat destruction, hunting, and drought.

HABITAT: Highly specialized; inhabits permanent freshwater marshes with broad expanses of cattails, sawgrass, or other tall, emergent grasses, and with scattered clumps of bushes or small trees with a low and distant horizon for visibility.

SPECIAL HABITAT REQUIREMENTS: A permanent water source supporting adequate quantities of the apple snail.

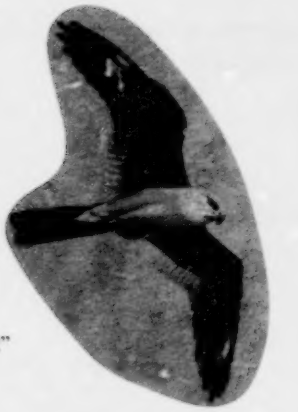
NEST: Often nests in loose colonies, sometimes in or adjacent to colonies of herons, egrets, and anhingas. Males construct nests up to 8 feet above water in cattails, reeds, or bulrushes, or in willows or other shrubs or trees growing in water. Also nests in areas with tree islands dominated by dead trees and shrubs, or on artificial nest platforms.

FOOD: Feeds exclusively on the apple snail, which it sights while flying slowly low over water, or while perching on an old stake, a mound of aquatic debris, or a cattail clump.

REFERENCES: Brown and Amadon 1968, Heintzelman 1979, Mackenzie 1977, Sprunt 1955, Stieglitz and Thompson 1967, Terres 1980.

Mississippi Kite

Ictinia mississippiensis



L12"

RANGE: Breeds from central Arizona to north-central Kansas, southern Illinois, western Kentucky, the northern portions of the Gulf States and South Carolina south to central and southeastern New Mexico across the Gulf Coast and north-central Florida. Expanding range along its northern border. Winters in South America.

STATUS: Common in the southern Great Plains, uncommon in the Southeast.

HABITAT: Inhabits forests, open woodlands, and prairies. Found on the prairies of Kansas and in baldcypress swamps and pinelands in the Gulf States, scrub oak country in Oklahoma, and mesquite-sand sagebrush rangeland in Texas.

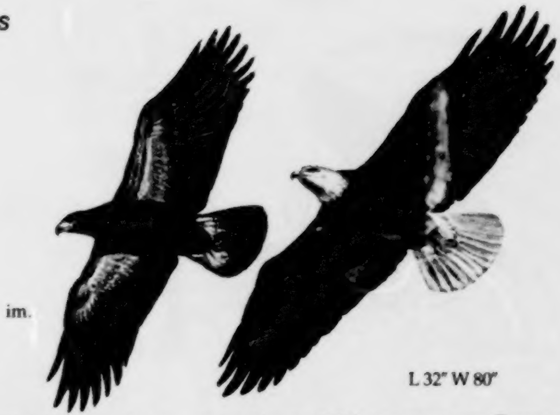
NEST: In the East, nests in riparian habitats, or in large pines, oaks, and sweetgums of large woods. In the Great Plains, nests in shelterbelts, farm woodlots, lawn trees in towns, or any small grove of trees. Also nests in scrub oaks and mesquite. Depending on the tree, places nest from 10 to 135 feet above ground. In Arizona, nests in cottonwoods taller than 50 feet in open groves or in scattered clumps surrounded by dense riparian scrubland of saltcedar and velvet mesquite 6.5 to 33 feet tall.

FOOD: Primarily consumes insects caught in the air, including grasshoppers, locusts, cicadas, katydids, large beetles, and dragonflies; also eats small snakes, lizards, and frogs.

REFERENCES: Brown and Amadon 1968, Glinski and Ohmart 1983, Heintzelman 1979, Kaufman in Farrand 1983a, Oberholser 1974a, Parker and Ogden 1979, Sprunt 1955, Terres 1980.

Bald Eagle

Haliaeetus leucocephalus



RANGE: Breeds from central Alaska and northern Yukon across Canada to Labrador and Newfoundland, south locally to the Aleutian Islands, southern Alaska, central Arizona, southwestern and central New Mexico, Baja California, and the Gulf Coast; very locally distributed in the interior of North America. Winters generally throughout the breeding range, but most frequently from southern Alaska and southern Canada southward.

STATUS: Endangered and threatened in parts of the lower 48 states.

HABITAT: Closely associated with lakes and large rivers in open areas, forests and mountains, and along seacoasts. In Alaska and Canada, where human disturbance is slight, habitat is composed of a narrow strip of land along lakeshores and rivers that provides trees for nesting, fishing, and loafing. Needs large trees adjacent to water, preferably snags, but also live trees or boulders that provide good visibility, for perching. Winters in coastal habitats and inland where ice-free waters allow access to fish.

SPECIAL HABITAT REQUIREMENTS: Large bodies of water containing abundant fish resources, large trees for nesting, perching, and roosting, and freedom from human disturbance.

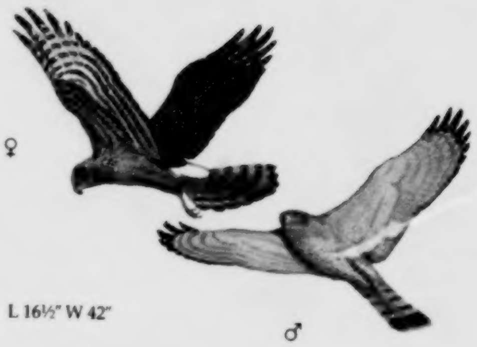
NEST: Prefers to build a large, heavy nest 10 to 150 feet above ground in very tall living trees, usually close to water. If suitable trees are not available, nests are built on rocky cliffs or on the ground. Shows strong attachment to the nest site, and characteristically adds new material to the nest each year.

FOOD: Feeds primarily on fish it catches or takes from an osprey. Will feed on waterfowl and other birds, carrion, small- to medium-sized mammals, and turtles. Inland, subsists mainly on dead waterfowl during winter.

REFERENCES: DeGraff et al. 1980, Evans 1982, Fielder 1982, Grubb and Kennedy 1982, Heintzelman 1979, Mackenzie 1977, Sprunt 1955.

Northern Harrier

Circus cyaneus
(formerly Marsh Hawk)



L 16½" W 42"

RANGE: Breeds from northern Alaska to southern Quebec and Newfoundland south to Baja California, southern Arizona, southern and eastern Texas, southern Illinois, and southeastern Virginia. Winters from Alaska (casually) and southern British Columbia east to South Dakota, southern Ontario, and Massachusetts south through the United States to South America.

STATUS: Common; populations are increasing slightly in the Southwest, and declining in the Northeast and Midwest.

HABITAT: Typically inhabits sloughs, wet meadows, fresh or salt marshes, swamps, prairies and plains. Generally roosts on the ground or perches on very low objects such as fence posts or tree stumps. During the non-breeding season, inhabits areas far removed from nesting habitat. Roosts in undisturbed fields or marshes in winter.

SPECIAL HABITAT REQUIREMENTS: Open country with herbaceous or low woody vegetation for concealing nests.

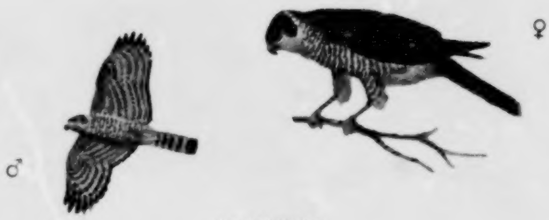
NEST: Nests singly or sometimes semi-colonially, on the ground in a variety of sites, but usually near or above water. Nests in tall grass in open fields, in swamps with low shrubs and clearings, sometimes built up over water on a stick foundation, sedge tussock, or willow clump, or on a knoll of dry ground.

FOOD: Hunts for food, primarily on the wing, over fields, marshes, and meadows, taking a wide variety of prey including mammals, birds, amphibians, reptiles, insects, and fishes. Mostly eats small mammals.

REFERENCES: DeGraff et al. 1980, Evans 1982, Heintzelman 1979, Low and Mansell 1983, McAtee 1935, Sprunt 1955, Tate and Tate 1982, Terres 1980.

Sharp-shinned Hawk

Accipiter striatus



L 10½" W 21"

RANGE: Breeds from western and central Alaska and northern Yukon to southern Labrador and Newfoundland, south to central California, southern Texas, the northern parts of the Gulf States, and South Carolina. Winters from southern Alaska, the southernmost portions of the Canadian Provinces south through the United States to Panama.

STATUS: Fairly common; the population appears to be recovering from earlier declines that occurred until the early 1970's in the eastern United States.

HABITAT: Primarily inhabits coniferous and mixed conifer-birch-aspen forests of the Canadian and Transition life zones northward to the Arctic tree line. Less commonly inhabits other woodland types except in mountainous areas. During migration and in winter it may occur in almost any type of habitat containing trees or shrubs.

SPECIAL HABITAT REQUIREMENTS: Dense coniferous-deciduous forest.

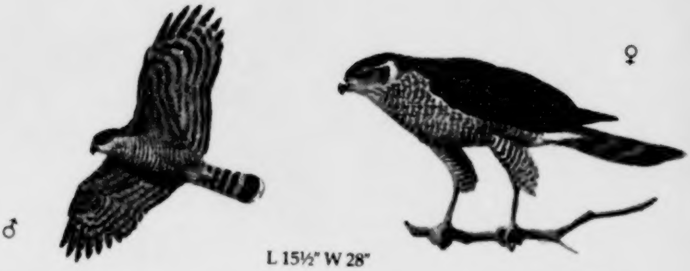
NEST: Usually nests in trees with dense foliage, primarily conifers, from 6 to 90 feet, typically 30 to 35 feet above ground and below a well-developed canopy. Nests may be in small groves of conifers surrounded by deciduous trees. Generally constructs a new nest each year in the immediate area of the previous year's nest.

FOOD: Feeds primarily on birds sighted while flying over forest floor, meadows, and brushy pastures. Sparrow-sized birds are taken most often, but occasionally attacks birds larger than itself. Also eats a few small mammals, reptiles, and insects.

REFERENCES: DeGraff et al. 1980, Evans 1982, Heintzelman 1979, Jones 1979, Platt 1976, Reynolds et al. 1982, Tate and Tate 1982.

Cooper's Hawk

Accipiter cooperii



L 15½" W 28"

RANGE: Breeds from southern British Columbia and central Alberta to southern Quebec and Maine south to Baja California, Mexico, Louisiana, central Mississippi, Alabama, and Florida. Winters from Washington, Colorado, and southern Minnesota to New England south through the southern United States, to Costa Rica.

STATUS: Uncommon.

HABITAT: Inhabits various types of mixed and deciduous forests and open woodlands including small woodlots, riparian woodlands in dry country, open arid pinyon woodlands, and forested mountainous regions. May use almost any type of habitat containing trees or shrubs during winter and in migration.

SPECIAL HABITAT REQUIREMENTS: Mature coniferous or deciduous woodlands.

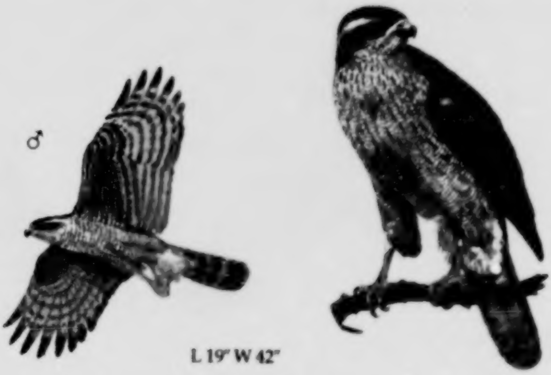
NEST: Usually nests in deciduous or coniferous trees near the edge of a wooded area, with large open fields and water nearby. Places nest from 20 to 60 feet above ground (usually 35 to 45 feet). Occasionally uses old crow nests.

FOOD: Hunts from inconspicuous perches, and catches its prey, primarily birds, by surprise. Consumes medium-sized birds such as thrushes, jays, starlings, and quail primarily but also takes smaller birds and larger birds up to the size of ruffed grouse. Also eats chipmunks, red squirrels, rabbits, other small mammals, amphibians, and insects.

REFERENCES: DeGraff et al. 1980, Evans 1982, Heintzelman 1979, Jones 1979, Reynolds et al. 1982.

Northern Goshawk

Accipiter gentilis
(formerly Goshawk)



RANGE: Breeds from western and central Alaska and northern Yukon to Labrador and Newfoundland, south to southern Alaska, central California, southern New Mexico, western South Dakota, northern Minnesota, and northwestern Connecticut, and in the northern Appalachian Mountains. Winters throughout the breeding range may extend as far south as the Gulf States during periodic invasions related to food shortage.

STATUS: Uncommon to rare but increasing; range is expanding southward in Appalachians.

HABITAT: Inhabits mixed hardwood and coniferous forests in temperate and boreal regions, from sea level to tree line. Prefers woodlands with intermediate canopy coverage interspersed with fields or wetlands, especially in remote areas.

SPECIAL HABITAT REQUIREMENTS: Extensive mixed woodlands with large trees for nesting.

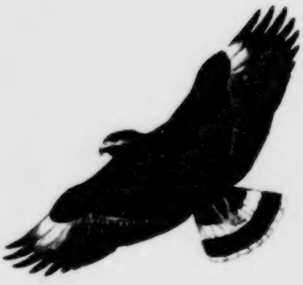
NEST: Prefers to nest in large hardwood trees 30 to 40 feet above ground, where clear, level access is afforded by a stream or other opening. Frequently selects birch, maple, aspen and beech for nesting trees; occasionally selects juniper, pine, spruce, and fir. Usually builds a new nest each year, but may build on top of an old hawk nest.

FOOD: Hunts for prey in dense woodlands, clearings, and open fields. In one study, its diet consisted of 54 percent birds, 37 percent mammals, and 9 percent insects. Eats grouse, quail, pheasants, small hawks, owls, crows, gulls, ducks, doves, thrushes, rabbits, squirrels, chipmunks, mice, woodchucks, muskrats, weasels, shrews, grasshoppers, and caterpillars.

REFERENCES: Cramp and Simmons 1980, DeGraff et al. 1980, Evans in Farrand 1983a, Heintzelman 1979, Jones 1979, McAtee 1935, Shuster 1980, Terres 1980.

Common Black-Hawk

Buteogallus anthracinus
(formerly Black Hawk)



L 20" W 48"

RANGE: Resident in central Arizona, southwestern Utah, southern New Mexico, and western Texas, south through Central America to Colombia (northernmost populations move southward during winter).

STATUS: Rare; threatened in Arizona and New Mexico.

HABITAT: An obligate of riparian areas. Optimum habitat consists of a flowing stream bordered by mature riparian forests. Also inhabits broad alluvial valleys, narrow rocky canyons, or marshes near the coast.

SPECIAL HABITAT REQUIREMENTS: Mature, relatively undisturbed habitat with a permanent water source and tall (75 to 100 feet) trees for nesting.

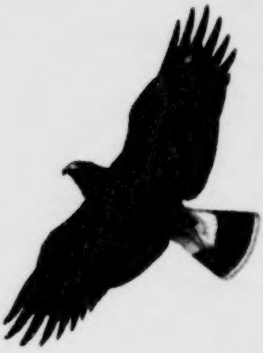
NEST: Nests in trees from 15 to 100 feet above ground, preferably within a grove of trees rather than in a lone tree. Builds nests in cottonwood, sycamore, alder, mesquite, willow, velvet ash, ponderosa pine and Douglas-fir. May use same nest for successive years.

FOOD: Prefers to fish in streams of low to moderate gradient, less than one foot deep with scattered boulders and some low or fallen branches. Usually locates prey while flying but also hunts from a perch. Eats a varied assortment of prey, including beach and land crabs, frogs, fishes, crayfish, reptiles, small mammals, birds, and insects.

REFERENCES: Heintzelman 1979, Oberholser 1974a, Schnell 1979.

Harris' Hawk

Parabuteo unicinctus



L 18" W 43"

RANGE: Resident in southern Kansas, and from southeastern California (recently reintroduced), southern Arizona, southern New Mexico, and central Texas south to South America.

STATUS: Fairly common.

HABITAT: Inhabits arid desert scrub of mesquite, palo verde and large cacti in the Southwest, river woodlands, and brushy flatlands. Infrequently found in yucca, cactus, creosotebush deserts, and oak-juniper habitats. Commonly perches on tops of telephone poles, trees, and bushes; on large cacti; and in snags.

SPECIAL HABITAT REQUIREMENTS: Thorn-scrub habitats.

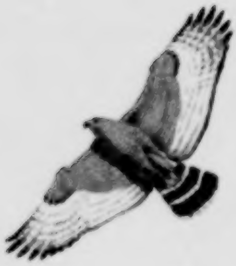
NEST: Nests from 5 to 30 feet up in cactus, mesquite, hackberry, yucca, Spanish-bayonet, paloverde, ironwood, cottonwood, ebony, and other trees. May nest in pairs or in trios with an extra male that also brings prey to the nest.

FOOD: Consumes a diet comprising 57 percent mammals, 35 percent birds, and 7 percent lizards. Feeds on rabbits, wood rats, mice, night-herons, teal, flickers, and other birds and mammals.

REFERENCES: Harrison 1979, Heintzelman 1979, Oberholser 1974a, Sprunt 1955, Terres 1980, Terrill in Farrand 1983a.

Gray Hawk

Buteo nitidus



L 15" W 35"

RANGE: Breeds in southern Arizona and southern Texas (the northwestern extreme of its breeding range) south to South America. Northernmost populations usually migrate south in nonbreeding season.

STATUS: Rare.

HABITAT: Is found primarily in riparian willow, cottonwood, and sycamore groves in the San Pedro and Santa Cruz river drainages of Arizona. Inhabits mature woodlands of river valleys and nearby semiarid mesquite and scrub grasslands.

SPECIAL HABITAT REQUIREMENTS: Stands of cottonwood and willow near rivers for nesting.

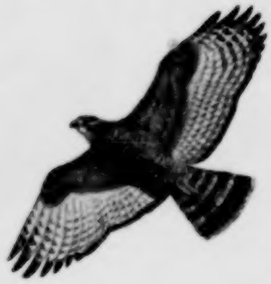
NEST: The small nest is placed from 20 to 40 feet up in cottonwood, hackberry, or mesquite along streams or rivers.

FOOD: Prefers to feed on lizards and small snakes, and frequently eats beetles and large grasshoppers. Also catches and eats rabbits, squirrels, mice, quail, young doves, and fishes.

REFERENCES: Heintzelman 1979, Oberholser 1974a, Terres 1980, Terrill in Farrand 1983a.

Red-shouldered Hawk

Buteo lineatus



L 16" W 40"

RANGE: Breeds from northern California south, west of the Sierra Nevada divide, to Baja California; and from eastern Nebraska, central Minnesota, southern Ontario, and southern New Brunswick south to Mexico. Winters primarily from eastern Kansas and central Missouri to southern New England southward, but also sporadically throughout breeding range.

STATUS: Common, but population is unstable.

HABITAT: Inhabits moist, well-drained woodlands, wooded river swamps, bottomlands, and wooded margins of marshes, often close to cultivated fields. Seems to prefer mature forests and is usually more common in lowland areas than in mountainous regions.

SPECIAL HABITAT REQUIREMENTS: Riparian deciduous woodlands with tall trees for nesting.

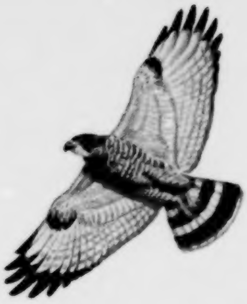
NEST: Nests 20 to 60 feet above ground in tall trees. Usually builds nest 35-45 feet above ground on a main fork and close to the tree trunk. Has built nests in oak, pine, baldcypress, mangrove, cottonwood, birch, beech, sycamore, yellow-poplar, ash, sweetgum and maple. Occasionally uses an abandoned hawk, crow, or squirrel nest as a foundation for a new nest; often uses the same nest site year after year.

FOOD: Perches on a fence post, tree, or telephone pole and overlooks a meadow, marsh, open field, or forest to sight prey. Feeds primarily on small mammals but also takes rabbits, squirrels, small birds, frogs, small snakes, toads, lizards, fishes, and large insects.

REFERENCES: Bednarz and Dinsmore 1982, DeGraff et al. 1980, Forbush and May 1955, Heintzelman 1979, McAtee 1935, Portnoy and Dodge 1979, Sprunt 1955, Stewart 1949, Tate and Tate 1982.

Broad-winged Hawk

Buteo platypterus



L 13" W 33"

RANGE: Breeds in central Alberta and central Saskatchewan, and from central Manitoba to New Brunswick and Nova Scotia south to eastern Texas, the Gulf Coast and Florida. Winters in southern Florida and from Mexico to South America.

STATUS: Common throughout range.

HABITAT: Inhabits continuous dry woodlands of oaks, beeches, maples, and mixed coniferous-hardwoods around lakes, streams, and swamps. In migration when conditions are favorable, forms large flocks, or "kettles," soars to the top of thermals, and then glides to another, thus saving energy during the long flight to its wintering area.

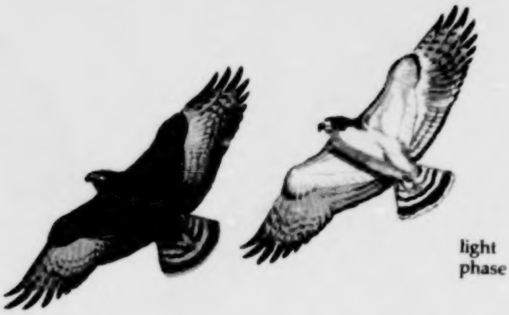
NEST: Normally nests near water in a variety of tree species, from 25 to 90 feet, but as low as 3 to 10 feet, above ground. Nest site preference is probably related to life form of the tree species and characteristics of the site rather than to prevalence of a particular tree species. Black and yellow birch are commonly selected for nesting in New England. Sometimes uses old crow, hawk, or squirrel nests.

FOOD: Hunts from perch in deep, shady woodlands or while flying over treetops or open meadows. Feeds largely on small mammals such as mice, moles, and shrews, occasionally red squirrels and chipmunks; also eats snakes, frogs, lizards, large larvae of night-flying moths, caterpillars, grasshoppers, beetles, crickets, fiddler crabs, crayfish, sometimes small fish, and some small birds.

REFERENCES: DeGraff et al. 1980, Evans in Farrand 1983a, Forbush and May 1955, Heintzelman 1979, Matray 1974, Sprunt 1955, Terres 1980.

Short-tailed Hawk

Buteo brachyurus



RANGE: Resident locally in peninsular Florida, from St. Marks and San Mateo south to Lake Okeechobee. Winters mostly south of Lake Okeechobee and in Central and South America.

STATUS: Rare.

HABITAT: A tropical species that barely reaches the United States in Florida, this buteo is found primarily in mixed woodland-savannah habitats, but also in mangrove and baldcypress swamps adjacent to forests, and along streams and the borders of lakes. Often perches in tall trees.

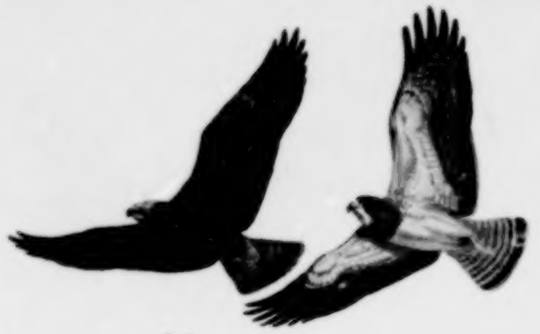
NEST: Nests in the topmost branches of tupelos, pines, magnolias, or baldcypresses, from 40 to 100 feet above ground or in the top of mangroves.

FOOD: Feeds on a great variety of birds, but primarily meadowlarks and red-winged blackbirds. Also feeds on some small mammals, reptiles, and amphibians.

REFERENCES: Heintzelman 1979, Ogden 1974, Ogden in Farrand 1983a, Sprunt 1955, Terres 1980.

Swainson's Hawk

Buteo swainsoni



RANGE: Breeds locally in east-central Alaska, Yukon, and Mackenzie, and from central Alberta and central Saskatchewan to western Illinois south to southern California, central and southern Texas, and western Missouri. Winters primarily on the pampas of southern South America, casually north to the southwestern United States and southeastern Florida.

STATUS: Common; population has decreased in the southern Great Plains.

HABITAT: Inhabits prairies, plains, deserts, large mountain valleys, savannahs, open pine-oak woodlands, and cultivated lands with scattered trees.

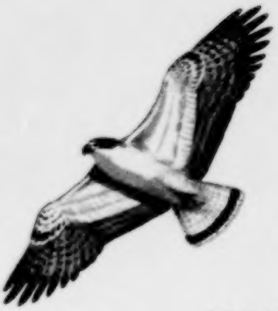
NEST: Nests in isolated trees, in shrubs and trees along wetlands and drainages, in windbreaks in fields and around farmsteads, in giant cactus, or on the crossbars of telephone poles. Occasionally nests on the ground, on low cliffs, on rocky pinnacles, or on cutbanks. May build nest up to 100 feet above ground in cottonwoods, or lower in willows or other shrubs. May repair and use same nest year after year; sometimes builds on old black-billed magpie nests.

FOOD: Hunts primarily from perches such as fence posts or low trees and from a vantage point on the ground. Diet consists of small mammals, birds, fishes, salamanders, frogs, snakes, and insects.

REFERENCES: Dunkle 1977, Evans in Farrand 1983a, Heintzelman 1979, Sprunt 1955, Tate and Tate 1982, Terres 1980.

White-tailed Hawk

Buteo albicaudatus



L 21" W 48"

RANGE: Resident from central and southeastern Texas south to South America.

STATUS: Uncommon.

HABITAT: Inhabits saltgrass flats of coastal grasslands, and open grassy ranges and chaparral country with scattered mesquite, yucca, and large cacti farther inland. Perches on bushes, trees, utility wires, or on the ground.

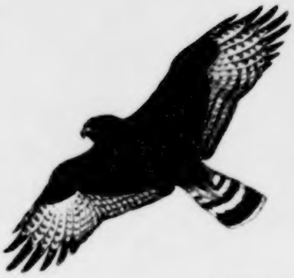
NEST: Nests on prairies, in brush, or in fringes of timber in sizeable bushes or small trees, 5 to 15 feet above ground. Prefers to nest on a ridge with a view all around. Nest plants include large cactus, yucca, and scrub oaks. May use the same nest in successive years.

FOOD: Feeds extensively upon rabbits; also eats cotton rats, lizards, snakes, frogs, grasshoppers, beetles, cicadas, and other insects.

REFERENCES: Heintzelman 1979, Oberholser 1974a, Terres 1980.

Zone-tailed Hawk

Buteo albonotatus



L 19" W 47"

RANGE: Breeds from central Arizona, southern New Mexico, and western Texas south to South America. Very rare north of Mexico in winter.

STATUS: Locally fairly common.

HABITAT: Inhabits deep, rough, and rocky wooded canyons and tree-lined rivers along middle slopes of desert mountains, especially in open deciduous or pine-oak woodland.

SPECIAL HABITAT REQUIREMENTS: Large trees for nesting.

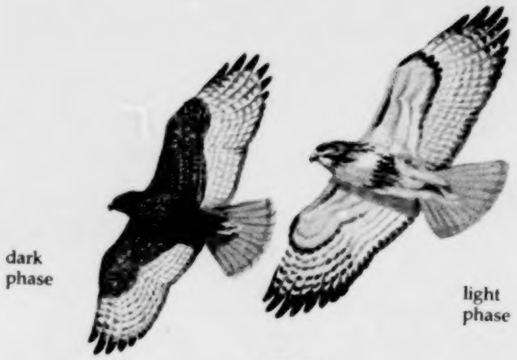
NEST: Builds a bulky nest in large trees, usually cottonwoods along streams and rivers, 25 to 100 feet above ground in leafy top. Rarely nests in mesquites.

FOOD: Eats chipmunks, quail and small birds, lizards, small fishes, and frogs (little is known about diet).

REFERENCES: Heintzelman 1979, Oberholser 1974a, Terres 1980.

Red-tailed Hawk

Buteo jamaicensis



L 18" W 48"

RANGE: Breeds from western and central Alaska and central Yukon to New Brunswick and Nova Scotia south to Central America. Winters from southern Canada throughout the remainder of the breeding range.

STATUS: Common, but population is declining.

HABITAT: Inhabits a wide variety of different habitats throughout its range, preferring mixed country of open pasture, fields, meadows, or swampy areas interspersed with coniferous or deciduous woods. Inhabits deserts and plains with scattered trees and open mountain forests, generally avoiding dense, unbroken woodlands and tundra.

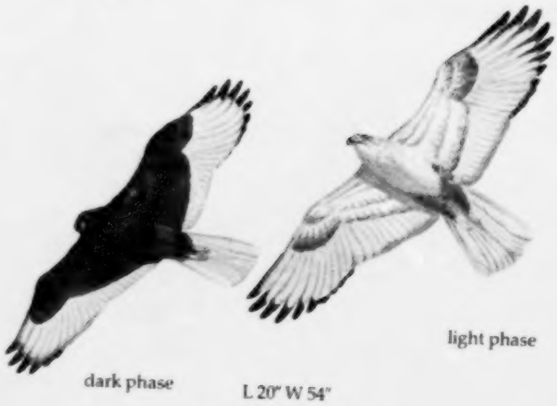
NEST: Usually nests in a tall tree in or at the edge of a woodland, or in an isolated tree in an open area. Frequently selects the largest and tallest tree (of a wide variety of species) available. Constructs nest next to the trunk in a crotch from 35 to 90 feet above ground. In treeless areas, nests on rocky cliffs, shrubs, or cactus.

FOOD: Frequently hunts for prey while perching in snags, live trees, or on poles in rather open areas or at forest edges. Also locates prey while soaring. Primarily eats small mammals; also eats birds, reptiles, and some insects.

REFERENCES: Austin 1964, Bednarz and Dinsmore 1982, DeGraff et al. 1980, Evans in Farrand 1983a, Fitch et al. 1946, Forbush and May 1955, Heintzelman 1979, Terres 1980.

Ferruginous Hawk

Buteo regalis



RANGE: Breeds from eastern Washington, southern Alberta, and southern Saskatchewan south to eastern Oregon, Nevada, northern and southeastern Arizona, northern New Mexico, north-central Texas, western Oklahoma, and Kansas. Winters primarily from the central and southern parts of breeding range south to Mexico.

STATUS: Common; population is stable or declining slowly.

HABITAT: Inhabits the semiarid western plains and arid intermountain regions; prefers relatively unbroken terrain, with scattered trees, rock outcrops, or tall trees along creek bottoms available for nesting sites. Generally winters on the southern plains.

SPECIAL HABITAT REQUIREMENTS: Open country with elevated nesting sites.

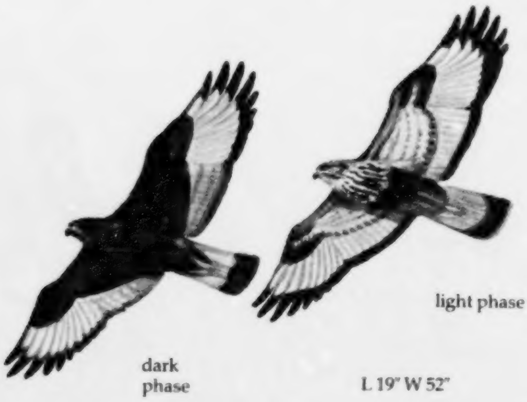
NEST: Prefers tall trees for nesting; will use a wide variety of sites, including ground nests on riverbed mounds, cutbanks, low hills, buttes and small cliffs, in short trees in open country, powerline structures, and haystacks. Tree nests are usually in the upper canopy, from 6 to 55 feet above ground. Nests are often used year after year.

FOOD: Hunts from a perch, while soaring, during low, rapid flight over open country, or while systematically searching and hovering at 40 to 60 feet. One study found its diet to be 70 percent mammals, 27 percent birds, and 3 percent reptiles. Feeds primarily on rabbits, ground squirrels, and prairie dogs; also takes mice, rats, gophers, birds, snakes, locusts, and crickets.

REFERENCES: Blair and Schitoskey 1982, Evans 1982, Heintzelman 1979, Snow 1974a, Sprunt 1955, Tate and Tate 1982, Weston 1969, Woffinden and Murphy 1983.

Rough-legged Hawk

Buteo lagopus



RANGE: Breeds from western and northern Alaska, northern Yukon, and northern Labrador south to northern and southeastern Mackenzie, east to northern Quebec and Newfoundland; also from Kodiak Island and Umnak in the eastern Aleutian Islands and the Arctic Islands north to Prince Patrick, Victoria, Bylot, and southwestern Baffin Islands. Winters from south-central Alaska (casually) and southern Canada south to southern California, southern Arizona east to southern Texas, Missouri, Tennessee, and Virginia, casually to eastern Texas and the Gulf Coast. Concentrates in areas of high prey density during winter.

STATUS: Most common hawk of the American arctic.

HABITAT: Inhabits open tundra and mountainsides; does not inhabit forests unless there is much open ground. Essentially an open country dweller that occupies a large range in its seasonal wanderings. In winter, prefers conifer groves for roosting and open, treeless areas for hunting.

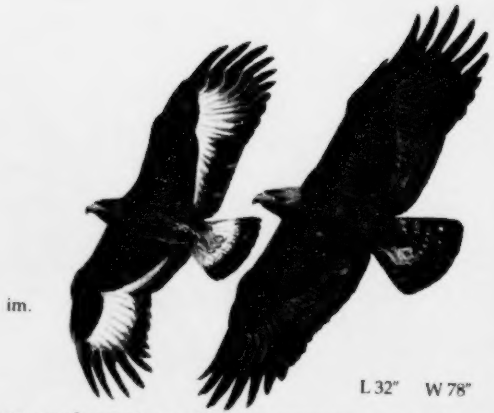
NEST: Nests primarily on cliffs along river bluffs, but is flexibile in selecting nesting substrate. Locates nests usually under overhangs on rocky cliffs, outcroppings, and ledges; occasionally nests in stunted trees or on the ground. Often returns to the same nest for many years.

FOOD: Hunts for food in wet meadows, bogs, and riparian areas. Generally seeks prey from the air rather than from a perch. Microtine rodents such as brown lemming, collared lemming, tundra vole, Alaska vole, red-backed vole, and other small mammals comprise the bulk of the diet. Shifts to other prey when rodents become scarce. Also consumes young ptarmigan, arctic ground squirrels, and sometimes small rabbits. During the breeding season, may consume up to 20 percent of diet as birds; during winter, consumes mammalian prey almost exclusively.

REFERENCES: Heintzelman 1979, Sprunt, 1955, Terres 1980, White and Cade 1971, Zarn 1975.

Golden Eagle

Aquila chrysaetos



RANGE: Breeds from northern and western Alaska east to Labrador, south to southern Alaska, Baja California, western and central Texas, western Oklahoma, and western Kansas; in eastern North America to New York and New England. Winters from south-central Alaska and the southern portions of the Canadian provinces south throughout the breeding range, rarely to coastal South Carolina.

STATUS: Fairly common in the West, rare in the East.

HABITAT: Inhabits open country, from barren areas to open coniferous forests, primarily in hilly and mountainous regions, but also in rugged deserts, on the plains, and in tundra. Prefers large trees with large horizontal branches and cliffs for roosting and perching. In the West, often moves down from the mountains onto the plains and valleys for winter.

SPECIAL HABITAT REQUIREMENTS: Elevated nest sites, especially cliffs, that are isolated from human disturbance and are close to hunting areas.

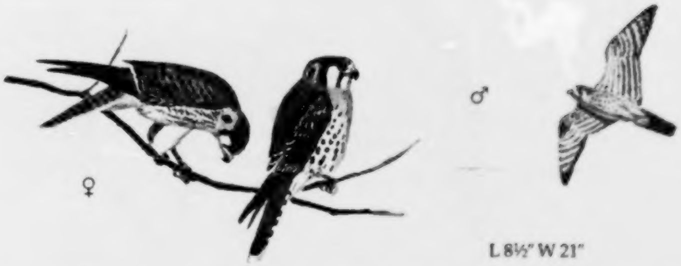
NEST: Usually nests on cliff ledges, preferably overlooking grasslands, but also nests in trees or on the ground. In the western mountains, nests at elevations of 4,000 to 10,000 feet above sea level. May use the same nest year after year, or pairs may use alternate nests in successive years.

FOOD: An opportunist; hunts for a variety of prey by soaring over open country or by sighting prey from perch. Feeds primarily on mammals (mainly lagomorphs), but also marmots, prairie dogs, ground squirrels, weasels, woodrats, skunks, and mice, rarely on larger mammals. Also eats grouse, pheasants, owls, hawks, rock doves, magpies, and other birds, as well as rattlesnakes and some carrion.

REFERENCES: DeGraff et al. 1980, Heintzelman 1979, Jollie 1943, McGahan 1968, Snow 1973, Terres 1980.

American Kestrel

Falco sparverius



RANGE: Breeds from western and central Alaska and southern Yukon to northern Ontario, southern Quebec, and southern Newfoundland south to Mexico. Winters from south-central Alaska, southern British Columbia, and northern United States south throughout the breeding range to Panama.

STATUS: Common.

HABITAT: Widely distributed in habitats that include deserts, forest openings, marshes, grasslands, agricultural and suburban areas, towns, and cities. Frequently perches on fence posts, utility poles and wires, and in trees. Occupies the same types of habitats during winter as during the breeding season.

SPECIAL HABITAT REQUIREMENTS: Open country with low vegetation, cavities in trees with dbh greater than 12 inches, and elevated perches from which to sight prey.

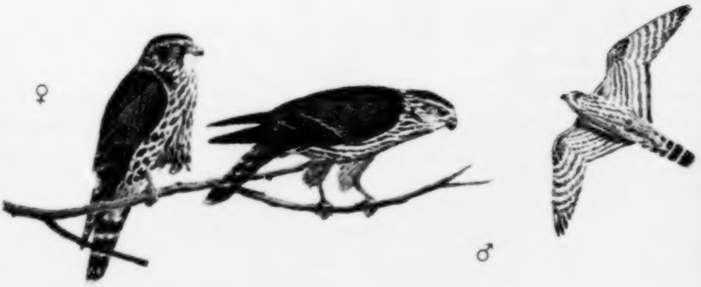
NEST: Prefers to nest in natural tree cavities with tight-fitting entrances, or in cavities excavated by flickers. If these are unavailable, nests in a variety of sites including niches in rocky cliffs, under eaves of buildings, in old magpie nests, in cavities in cacti, in unused chimneys, or in nest boxes. Nest sites are usually along roadways, streams, ponds, or forest edges, from 4 to 65 feet above ground, though typically from 10 to 35 feet.

FOOD: Hunts from a perch or while hovering over areas with short, open vegetation. Primarily eats insects such as grasshoppers, crickets, and beetles in summer, but also takes mice and other small mammals, birds, lizards, toads, frogs, and small snakes; rarely takes spiders or worms.

REFERENCES: Balgooyen 1976, DeGraff et al. 1980, Evans in Farrand 1983a, Heintzelman 1979, McAtee 1935, Smith et al. 1972, Thomas et al. 1979.

Merlin

Falco columbarius



L 12" W 23"

RANGE: Breeds from northwestern Alaska and northern Yukon to Labrador and Newfoundland, south to southern Alaska, eastern Oregon, northern Minnesota, southern Quebec, New Brunswick, and Nova Scotia. Winters west of the Rockies from south-central Alaska, southern British Columbia, Wyoming, and Colorado southward, locally across southern Canada, and in the eastern United States from Maryland, the Gulf Coast, and southern Texas to South America.

STATUS: Uncommon.

HABITAT: Inhabits open areas such as forest edges, bogs, and lakes in boreal and moist Pacific Coastal forests, and prairie-parkland of the northern Great Plains. Some remain in prairie habitat even in winter; others will use almost any habitat type encountered in its winter range.

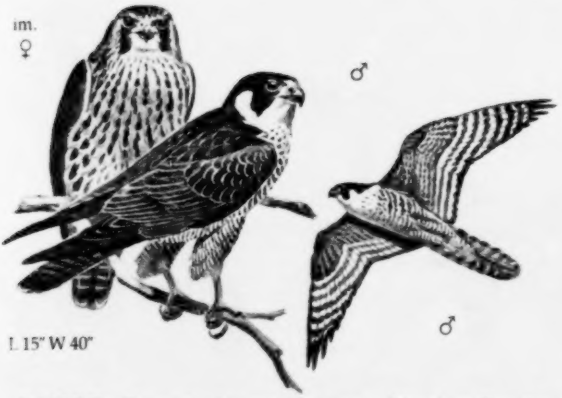
NEST: Generally nests in trees from 5 to 60 feet above ground, often in old stick nests of crows, ravens, magpies, or other raptors, in or near open areas, and generally near water. Occasionally nests on the ground, on bare ledge of a cliff, or in cavities in trees. Prairie birds prefer to nest in isolated groves of trees near water, and in wooded areas along rivers, generally in coniferous trees.

FOOD: Sights prey from an inconspicuous perch or during flight. Preys almost entirely on small to medium-sized birds; also takes large insects, scorpions, spiders, crayfish, toads, small snakes, bats, and small mammals.

REFERENCES: Evans 1982, Fox 1964, Heintzelman 1979, McAtee 1935, Sprunt 1955, Trimble 1975.

Peregrine Falcon

Falco peregrinus



RANGE: Breeds from northern Alaska, Banks, Victoria, southern Melville, Somerset and northern Baffin Islands, and Labrador south to Baja California, southern Arizona, New Mexico, western and central Texas, and Colorado; recently re-introduced and re-established as a breeding bird in parts of the northeastern United States. Winters from southern Alaska, the Queen Charlotte Islands, coastal British Columbia, the central and southern United States, and New Brunswick south to South America.

STATUS: Rare and endangered; catastrophic decline primarily due to organochlorine pesticides.

HABITAT: Usually inhabits open country from tundra and seacoasts, to high mountains and more open forested regions, preferably where there are rocky cliffs with ledges overlooking rivers, lakes, or other water and an abundance of birds. Sometimes breeds in cities.

SPECIAL HABITAT REQUIREMENTS: Cliffs or other nesting habitat near water, and an abundance of prey.

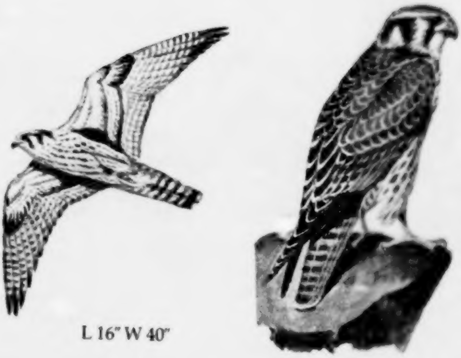
NEST: Prefers to nest in a shallow depression scraped in gravel and debris on a high cliff ledge, pothole, or small cave that provides sanctuary from disturbance. Bluffs, slopes, pinnacles, cutbanks, and seastacks are also used as nest sites in the far north. Other nest sites include old stick nests of ravens and hawks, ledges of tall buildings, and historically, holes and stubs of large trees. Tends to return to the same nesting cliff.

FOOD: Pursues prey, primarily birds, after sighting from perch or while soaring. Small- to medium-sized birds are usually captured in flight; birds too large to be carried are knocked to the ground. Feeds on a wide variety of birds; occasionally takes mammals, some insects, and fishes.

REFERENCES: Cade 1960, DeGraff et al. 1980, Evans 1982, Heintzelman 1979, Hickey 1942, Hickey and Anderson 1969, Terres 1980, White and Cade 1971.

Prairie Falcon

Falco mexicanus



L 16" W 40"

RANGE: Breeds from southeastern British Columbia, southern Alberta, southern Saskatchewan, and northern North Dakota south to Baja California, New Mexico, and northern Texas. Winters from the breeding range in southern Canada south to Mexico.

STATUS: Locally common.

HABITAT: Inhabits prairies, deserts, riverine escarpments, canyons, foothills, and mountains in relatively arid western regions. Occupies open, treeless terrain that accommodates its low-level style of hunting. Wintering birds are found away from the breeding areas in intermontane valleys and on the Great Plains.

SPECIAL HABITAT REQUIREMENTS: Suitable nesting sites on cliffs in open country free of human disturbance.

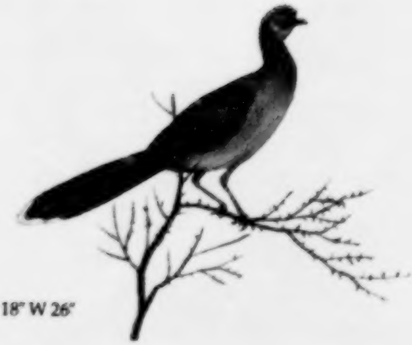
NEST: Nests on cliffs, from low rock outcrops of 30 feet to vertical cliffs 400 feet high. Prefers cliffs with a sheltered ledge with loose debris or gravel for a nest scrape, overlooking treeless country for hunting. Also nests in larger caves in cliffs and vertical or columnar cracks with lodged material. Sometimes uses old nests of ravens, hawks, or eagles.

FOOD: Typically hunts from perches or in low, rapid, searching flight, usually capturing prey on or near the ground. Feeds on a variety of prey including ducks, prairie chickens, quail, pigeons, doves, sparrows and other small birds, prairie dogs, mice, ground squirrels, young rabbits, grasshoppers, and lizards.

REFERENCES: Enderson 1964, Evans 1982, Heintzelman 1979, McAtee 1935, Snow 1974b, Sprunt 1955, Terres 1980.

Plain Chachalaca

Ortalis vetula
(formerly Chachalaca)



RANGE: Resident from the lower Rio Grande Valley to Costa Rica. Introduced on Sapelo, Blackbeard, and Little St. Simons Islands, Georgia.

STATUS: Locally common to uncommon; largely restricted to parks and refuges because of clearing of habitat for residential and agricultural purposes.

HABITAT: Prefers wooded stream beds with thick growths of ebony blackbead, hackberry, mesquite, and thick, shrubbery undergrowth. Rarely found far from water; also inhabits thick growths of sugarberry, Texas lignumvitae, huisache, cedar elm, and willow. Has adapted well to living in relatively small (1 to 5 acres) tracts of dense woodland vegetation.

SPECIAL HABITAT REQUIREMENTS: Dense brushland.

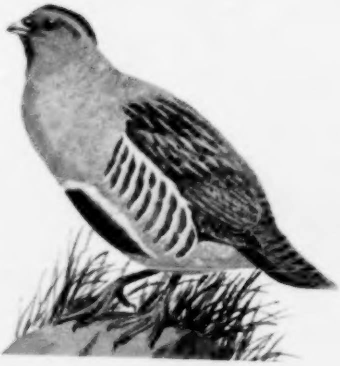
NEST: Constructs a small, flimsy nest or uses old nests of birds such as the yellow-billed cuckoo, groove-billed ani, or curve-billed thrasher. Nests in trees, or in vines supported by trees, from 3 to 33 feet above ground. Most commonly uses cedar elm, huisache, sugarberry, anacua, and ebony blackbead. Spanish moss and tangled vines commonly support and conceal the nest.

FOOD: Eats berries, especially hackberries, along with the fruit of mesquite, mangoes, junipers, palmettos, persimmons, wild grapes, and figs; also eats green leaves, buds and shoots of plants, grain (especially cracked corn), and some insects.

REFERENCES: Johnsgard 1975a, Marion 1974, Marion and Fleetwood 1978, Oberholser 1974a, Terres 1980.

Gray Partridge

Perdix perdix



L 10"

RANGE: Widely introduced in North America and established locally from southern British Columbia to southwestern Quebec, New Brunswick, and Nova Scotia south to northern Nevada, northern South Dakota, central Indiana, and northern Vermont. Native to Eurasia.

STATUS: Locally abundant.

HABITAT: Has adapted well to diverse and intensive agricultural land use practices. Prefers cropland areas interspersed with native grassland, but also inhabits brushy canyons and brushy stream bottoms in the West, irrigated agricultural lands, and gently rolling hay fields, grain fields, and pastures. In winter, needs protective woody cover during adverse weather and accessible food resources, such as waste grain and green plant material.

SPECIAL HABITAT REQUIREMENTS: Herbaceous cover for nesting, and grit (primarily obtained from gravel roads) for grinding food.

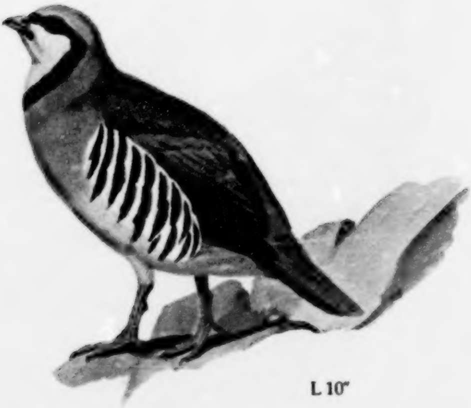
NEST: Nests in a shallow scrape in the ground, usually located in grasses, or near the edge of hay fields or grain fields, sometimes in alfalfa fields, or along fencerows or roadsides.

FOOD: Feeds on cultivated grains, seeds of grasses and herbs, and on insects. Obtains some of its water from succulent vegetation.

REFERENCES: Johnsgard 1975a, Kobriger 1983, McCabe and Hawkins 1946, Terres 1980, Weigand 1980.

Chukar

Alectoris chukar



RANGE: Introduced widely in North America, and established locally from south-central British Columbia to central and eastern Montana south to Baja California, southern Nevada, northwestern New Mexico, and south-central Colorado. Native to Eurasia.

STATUS: Locally common.

HABITAT: Inhabits open, rocky, sagebrush-grassland habitats from below sea level to as high as 12,000 feet, on dry mountain slopes and canyons. Also inhabits areas with Mormon tea, bitterbrush, currant, and rabbitbrush; in the southern portion of its range it may be found in saltbush-grassland habitat, but generally avoids pinyon-juniper climax habitat. During hot weather, tends to concentrate near water provided by springs, seeps, and small perennial and intermittent streams, dispersing when surrounding vegetation greens up after rains. Moves to lower elevations in heavy snows. Roosts on the ground beneath sagebrush, under junipers, in the shelter of rock outcrops, and in open rocky places, but not in dense cover.

SPECIAL HABITAT REQUIREMENTS: Water source during hot weather in summer and early fall.

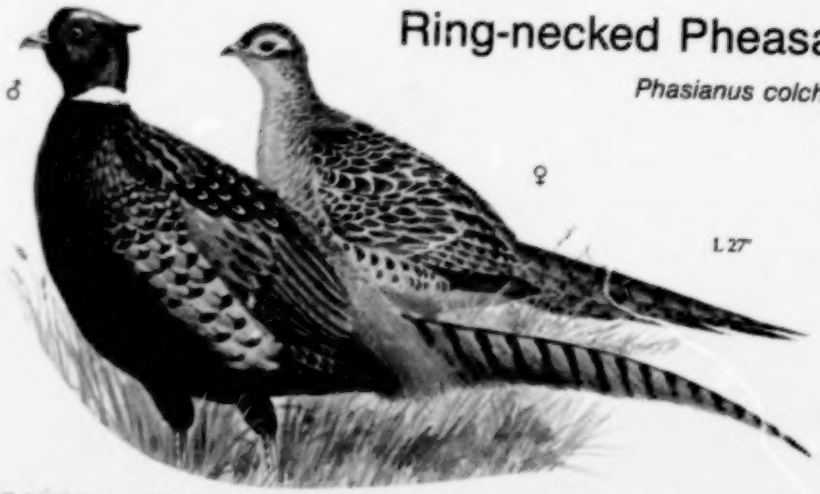
NEST: Nests in a depression scratched in the ground, constructed under shrubs or well concealed by rocks and brush in rocky areas. May occasionally have a dump nest.

FOOD: During summer and fall, feeds primarily on seeds of cheatgrass, Russian thistle, rough fiddleneck, and redstem filaree; also takes seeds of Indian ricegrass, curly dock, and mustard. Will also eat grass blades, stems and buds of a variety of plants, wild onion seeds, grasshoppers, and caterpillars.

REFERENCES: Christensen 1970, Johnsgard 1975a, Molini 1976.

Ring-necked Pheasant

Phasianus colchicus



RANGE: Introduced and established widely in North America, from southern British Columbia and central Alberta to northern Minnesota, southwestern Quebec, New Brunswick, and Nova Scotia south, at least locally, to southern interior California, Utah, northern and southeastern Texas, southern Illinois, Pennsylvania, New Jersey, and North Carolina. Native to Asia.

STATUS: Common.

HABITAT: Inhabits cultivated farmland interspersed with patches of brush or woodlots, especially areas with field border cover. Also inhabits fallow fields, brushy pastures, roadside hedgerows, cutover land, marshes, and meadows. Roosts mostly on the ground in weedy ditches, marshes, cattail swales, weed-grown fence rows, brush heaps, briar patches, and small farm-woodlots. In winter, needs protective cover such as marshes, thickets, shelterbelts, and heavy brush in ravines, along fencerows, and railroad right-of-ways, and an adequate supply of food.

SPECIAL HABITAT REQUIREMENTS: Agricultural land interspersed with dense protective cover.

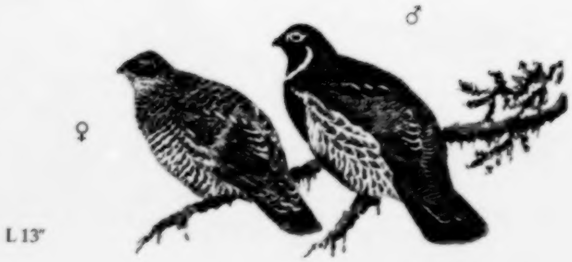
NEST: Nests on the ground in a scratched-out depression, preferably among plants that make maximum growth during spring, such as alfalfa or coolseason grasses. Locates nest in fields of alfalfa, sweet clover, winter wheat, or other grasses or grains; along roadsides, fencerows, and hedgerows; or in brushy pastures or wetlands.

FOOD: Feeds primarily on plant foods, especially waste grains, but also on seeds of weeds and grasses, acorns, buds and soft parts of herbaceous vegetation, fleshy fruits, insects, snakes, and mice.

REFERENCES: Baxter and Wolfe 1973, Dale 1956, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1975a, Ratti in Farrand 1983a, Terres 1980.

Spruce Grouse

Dendragapus canadensis



RANGE: Resident from northern Alaska to northern Quebec, Labrador, New Brunswick, and Nova Scotia south to south-coastal and southeastern Alaska, northern Oregon, southeastern Idaho, northwestern Wyoming, western Montana, and southeastern Alberta to northern Minnesota east to northern Vermont, northern New Hampshire, and eastern Maine (range is generally congruent with that of the northern coniferous forest).

STATUS: Uncommon in most of the southern portions of its range.

HABITAT: Inhabits short-needled coniferous forests, especially where living branches reach the ground and where there are numerous, scattered forest openings of a few hundred square feet. In the northeast, prefers wet lowland edges; farther west, prefers higher ground. Generally prefers a mixture of jack pine or lodgepole pine and spruce, and a sparse ground cover. Males establish breeding territories in dense pine stands. Shows little fear of humans and often called "fool hen."

SPECIAL HABITAT REQUIREMENTS: Large tracts of coniferous forest.

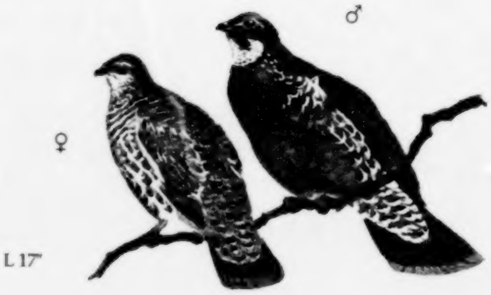
NEST: Nests on the ground in well-concealed sites, often under low branches of spruce, jack pine, or white pine; in brush; in deep moss; or adjacent to a tree trunk or stump.

FOOD: During winter, consumes diet of nearly 100 percent conifer needles. In other seasons, consumes a variety of foods, including leaves, flowers, berries, seeds, pine needles, and a few insects. Needs a source of fine, mineral-rich gravel.

REFERENCES: Johnsgard 1973, Pendergast and Boag 1970, Robinson 1969, 1980, Robinson in Farrand 1983a.

Blue Grouse

Dendragapus obscurus



RANGE: Resident from southeastern Alaska, southern Yukon, and extreme southwestern Mackenzie south along the Pacific Coast to northern California; in mountains to central California, northeastern Nevada, northern Arizona, Colorado, and northern New Mexico; rare in mountains of southern California. Closely associated with Douglas-fir and true firs.

STATUS: Common.

HABITAT: Occupies a fairly vertical range in the western mountains, breeding at lower elevations in open stands of conifers or aspens with a brush understory, in meadows or in stands of mixed brush and herbs interspersed with bare ground adjacent to aspens or conifers. Males display in relatively open stands of trees or shrubs on earth mounds, rocks, logs, cutbanks, and occasionally tree limbs. During autumn, moves up from the open breeding range to stands of conifers or to timberline.

SPECIAL HABITAT REQUIREMENTS: Medium to large forest openings; shrubs, grasses, and forbs for nesting.

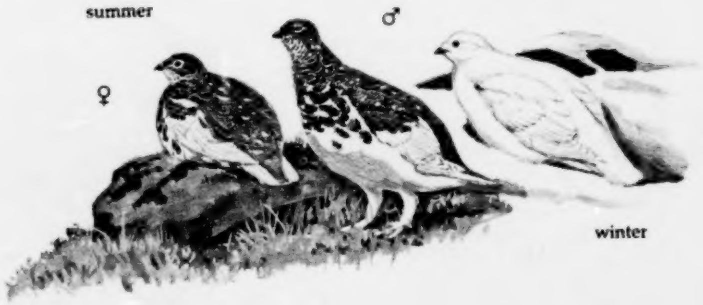
NEST: Nests in a shallow depression on the ground, well-concealed near logs or rocks, at the base of a tree, under sagebrush, or in the shelter of chokecherry, aspen, or cottonwood.

FOOD: During winter, eats diet limited to needles and buds of conifers, especially Douglas-fir, but also other firs, hemlock, and lodgepole pine. In other seasons, eats berries, flowers and leaves of herbaceous plants, and insects. In warm weather seldom far from a source of water. Can obtain necessary water from succulent vegetation or berries, if available.

REFERENCES: Beer 1943, Bendell and Elliott 1966, Harju in Farrand 1983a, Johnsgard 1973, Rogers 1968, Terres 1980, Verner and Boss 1980.

White-tailed Ptarmigan

Lagopus leucurus



L 10"

RANGE: Resident from south-central Alaska, central Yukon, and southwestern Mackenzie south to southern Alaska, southern British Columbia, including Vancouver Island, and the Cascade Mountains of Washington, and along the Rocky Mountains from southwestern Alberta to northern New Mexico. Introduced into the high Sierra Nevada of California, Wallowa Mountains in Oregon, and the Uinta Mountains in Utah. Commonly migrates locally during winter to areas slightly below treeline.

STATUS: Locally common in alpine tundra.

HABITAT: Inhabits rocky tundra areas with sparse vegetation in high mountains. Breeds in territories adjacent to spruce-willow alpine timberline zone (krummholz) and also small windblown areas. Males tend to winter above tree line adjacent to breeding areas where wind prevents complete coverage of woody shrubs; females tend to winter in basins and drainages that are not as windblown and somewhat removed from tundra.

SPECIAL HABITAT REQUIREMENTS: Alpine tundra.

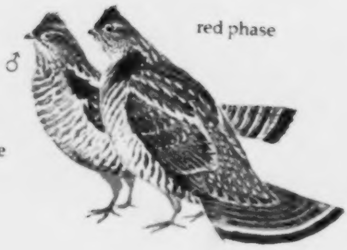
NEST: Nests on the ground in areas that become snowfree early in June and are somewhat protected from wind, such as under small shrubs or next to rocks larger than 6 inches. Females locate their nests near the fringe of a male's breeding territory, but more importantly, near brooding areas where vegetation is short and rocks 6 inches or larger cover more than 50 percent of the ground surface.

FOOD: During summer, primarily consumes seeds and leaves of smartweeds, sedges, clover, and willow; also takes various green leaves, flowers, and some insects. During winter in Colorado, consumes willow primarily, alder secondarily. In Alaska, consumes alder catkins primarily, willow and birch secondarily.

REFERENCES: Braun 1969; Braun in Farrand 1983a; Braun and Rogers 1971; Johnsgard 1973, 1983a; May and Braun 1972; Weeden 1967.

Ruffed Grouse

Bonasa umbellus



RANGE: Resident from central Alaska and northern Yukon to southern Labrador south to northwestern California, central and eastern Idaho, central Utah, Wyoming and Montana, central and southeastern Minnesota, Ohio, in the Appalachian Mountains to northern Georgia and northeastern Virginia; locally to western South Dakota; introduced and established in Iowa and Newfoundland.

STATUS: Fairly common; population fluctuates.

HABITAT: Inhabits successional to subclimax hardwood forests larger than 10 acres that have *Betula* or *Populus* present and an understory of small hardwoods, shrubs, and fruit-producing bushes (early successional stages of plant growth on logged-over areas are ideal). Male uses logs, rocks, or other elevated sites for drumming in spring. Frequents hedgerows and brushy patches in early fall; moves into more heavily wooded areas, especially coniferous cover in winter. Roosts in snow when snow is deep and soft, or may roost in trees or on the ground.

SPECIAL HABITAT REQUIREMENTS: Hardwood forests with some conifers, dense undergrowth, openings, and drumming sites for males.

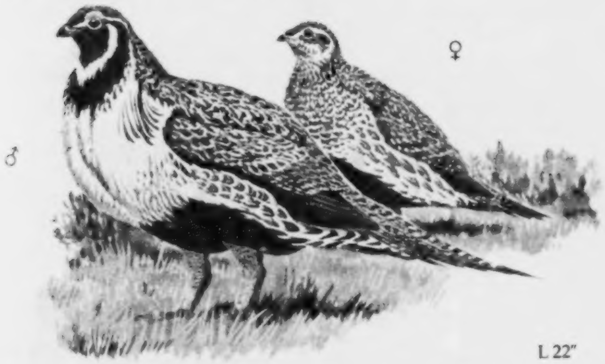
NEST: Nests on dry ground in the shelter of a fallen log, rock, root, or low-hanging conifer limb, usually near the base of a tree. Commonly nests within 100 feet of a road, path, or clearing, and close to a source of water.

FOOD: During winter, feeds primarily on aspen buds, but also on buds of birch, alder, and hazel. In other seasons, consumes an extremely varied diet, including over 600 species of plants (seeds, fruits, leaves, and buds), insects, and other animals, although animal food is only predominate in the diet the first 2 weeks after hatching.

REFERENCES: Boag and Sumanik 1969, Bump et al. 1947, DeGraff et al. 1980, Johnsgard 1973, Rue 1973.

Sage Grouse

Centrocercus urophasianus



RANGE: Resident locally from central Washington, southern Idaho, Montana, southeastern Alberta, southwestern Saskatchewan and North Dakota, and western South Dakota south to eastern California, south-central Nevada, southern Utah, Colorado and northern New Mexico. Generally, associated with big sagebrush.

STATUS: Common (formerly widespread); range has been reduced, and its population is lower than it was 30 years ago.

HABITAT: Inhabits sagebrush-dominated rangelands, from the plains to the mountains, preferably where sagebrush provides 15 to 50 percent of the ground cover. Depends entirely upon forms of sagebrush, primarily big sagebrush, for food from October through May and for cover throughout the year. In spring, males prefer relatively open, rather than dense, sagebrush cover for strutting grounds. May move up to 50 miles or more throughout the year; occupies areas with exposed sagebrush during winter.

SPECIAL HABITAT REQUIREMENTS: Sagebrush-dominated rangelands.

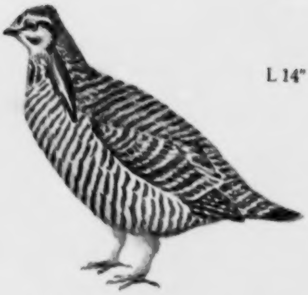
NEST: Usually nests beneath sagebrush in a shallow depression on the ground. Usually locates nest in drier sites close to strutting grounds where shrub cover is less than 50 percent and vegetation is 10 to 20 inches tall. Moves young broods to moist areas, where there is a plentiful supply of insects and green plant material.

FOOD: In winter, feeds entirely on sagebrush leaves. Prefers Wyoming big sagebrush to mountain big sagebrush, thus maximizing proteins and minimizing monoterpenes. Also feeds (to a small extent) on alkali sagebrush and, in Idaho on black sagebrush. In other seasons, also feeds on forbs and some insects.

REFERENCES: Braun in Farrand 1983a, Dalke et al. 1963, Johnsgard 1973, 1983a, Patterson 1952, Remington 1983, Tate and Tate 1982.

Greater Prairie-Chicken

Tympanuchus cupido
(includes Attwater's Prairie-Chicken)



RANGE: Resident locally from eastern North Dakota, northwestern and central Minnesota, northern Wisconsin, and northern Michigan south to northeastern Colorado, Kansas, southern and northeastern Oklahoma, central Missouri, and southern Illinois; also in southeastern Texas.

STATUS: Endangered in Texas; uncommon and local; range and population reduced because of agriculture, burning, mowing, overgrazing, oil development, drainage, shooting, and urban development.

HABITAT: Inhabits stands of natural tall or midgrass prairie, especially where natural grasslands are interspersed with moderate amounts of small-grain cropland. Males favor slightly elevated open areas of short grassland for display grounds, which are approximately 1 acre in size and surrounded by dense grasses with some brush cover. Moderately tall vegetation is used for night roosting, and edges of tallgrass and midgrass for day resting. Requires a stable source of food rather than protective cover or shelter for winter.

SPECIAL HABITAT REQUIREMENTS: Shortgrass and tallgrass prairies.

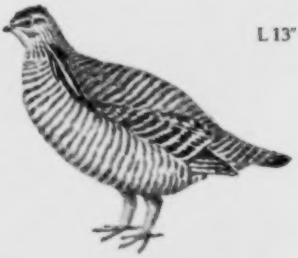
NEST: Nests in a slight depression on the ground in a well-drained site that provides good concealment from above, within 1/2 mile of display grounds, in ungrazed meadows, natural prairie stands, or in clumps of prairie grasses, usually near an open area. Chooses brood habitat that is usually heavier than nesting habitat, in old fields, native grasses, or in cultivated pastures, where shade and a plentiful supply of insects and succulent plants are available.

FOOD: Consumes mostly insects from May to October, especially grasshoppers. Consumes primarily plant foods, including fruits, leaves, flowers, acorns, seeds of grasses and weeds, and grains the rest of the year.

REFERENCES: Johnsgard 1975a, 1983a, Jones 1963, Mackenzie 1977, Terres 1980.

Lesser Prairie-Chicken

Tympanuchus pallidicinctus



RANGE: Resident locally from southeastern Colorado, south-central Kansas, and western Oklahoma to extreme eastern New Mexico and the Texas Panhandle.

STATUS: Uncommon and local.

HABITAT: Inhabits arid natural grasslands of the southern Great Plains that are interspersed with shrubs 3 feet tall or less. In Colorado, occupies plant communities dominated by sand sagebrush, little bluestem, switchgrass, sideoats grama, and red threeawn. In Oklahoma and New Mexico, occupies a shinnery oak vegetation type. Needs small trees or shrubs such as shin oak, sagebrush, skunkbrush, sand plum, Havard oak, sand sagebrush, and fragrant sumac for shade during warm summer months. In spring and fall males congregate on display grounds which are relatively void of vegetation and have good visibility. Tall, perennial grasses are used for loafing in winter.

SPECIAL HABITAT REQUIREMENTS: Shin oak or sand sagebrush rangelands.

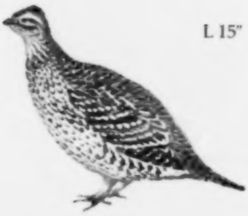
NEST: Nests on the ground in well-drained sites within 1/2 mile of display grounds. Builds nests that are well concealed from above in ungrazed meadows, natural prairie, or between grass clumps from previous years' growth, generally in tall, dense, perennial grasses.

FOOD: Primarily insectivorous during summer months. Consumes plant foods during the remainder of the year; leaf galls, catkins, leaves and acorns of shin oak can make up 70 percent of the seasonal diet; leaf and flower buds of fragrant sumac and the leaves of sand sagebrush are also important foods.

REFERENCES: Copelin 1963; Doerr and Guthery 1980; Hoffman 1963; Johnsgard 1975a, 1983a; Jones 1963; Taylor and Guthery 1980.

Sharp-tailed Grouse

Tympanuchus phasianellus



L 15"

RANGE: Resident, at least locally, from central Alaska and central Yukon to northern Ontario and west-central Quebec, south to eastern Oregon, central Utah, central Colorado, central Nebraska, central Minnesota, central Wisconsin, northern Michigan, and southern Ontario.

STATUS: Locally common; population is down in the northern Great Plains.

HABITAT: Inhabits mid to tall grasslands interspersed with scattered woodlands, arid sagebrush, brushy hills, oak savannah, and edges of riparian woodland. Prefers habitats with several small openings, 1 to 10 acres in size, close together or a single large opening of 50 to 100 acres. In late summer and early autumn found mainly in open cover, grassy openings, or in low, scattered brush. Later, moves to thickets and open woods; in winter, to edges of brush, open woods, or swamps. Prefers tops of low to medium hills or ridges with short, sparse vegetation for courtship sites. Roosts in trees or shrubs in brushy cover.

SPECIAL HABITAT REQUIREMENTS: Grasslands interspersed with shrubs or trees and grainfields.

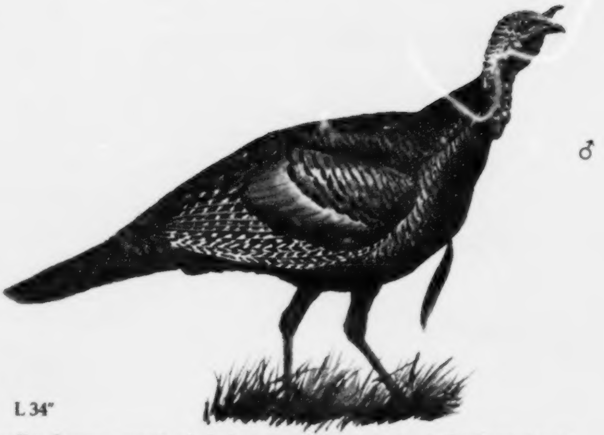
NEST: Nests on the ground, preferably among tall, rank grasses, but also in brushy or woody areas if grassland quality is poor. May nest in fields of winter wheat, or in residual cover of warm season grasses on north-facing slopes.

FOOD: Eats wide variety of foods, primarily the leaves, seeds, or buds of plants, and some insects, but also including fruits, cultivated grains, buds and catkins of birch and aspen, and grasshoppers.

REFERENCES: Hamerstrom 1963, Hamerstrom and Hamerstrom 1951, Johnsgard 1973, 1983a, Rogers 1969, Sisson 1976, Tate and Tate 1982.

Wild Turkey

Meleagris gallopavo
(formerly Turkey)



RANGE: Resident locally from central Arizona and central Colorado to northern Iowa, central Michigan, southern New Hampshire, and southwestern Maine south to southern Texas, the Gulf Coast, and Florida. Has been reintroduced into much of its former range, and successfully introduced locally in nearly all states outside the historic range.

STATUS: Locally fairly common.

HABITAT: Inhabits a wide range of forest types from the wooded swamps of the eastern and southeastern states to the sparsely wooded flatlands and river bottoms of the southern Great Plains and coniferous forests of the western mountains. In the East, prefers open, mature hardwood forests containing mast-bearing trees such as oaks; in the Southwest, prefers more arid, grass-dominated habitats having open-topped roosting trees, water, and succulent vegetation. In the West, most often associates with ponderosa or montane forests, scrub oaks, and junipers at altitudes of 6,000 to 12,000 feet.

SPECIAL HABITAT REQUIREMENTS: Mast-producing woodlands with forest openings or clearings, large dense conifers or hardwoods for roosting, and water.

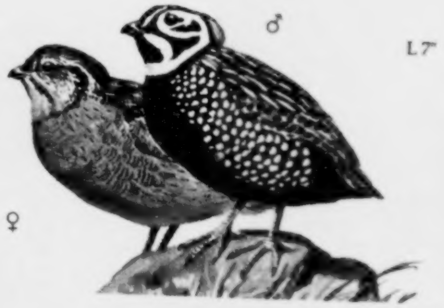
NEST: Nests in a slight depression on dry ground, usually in dead leaves at the base of a tree, beneath a bush, or under a log. Generally nests close to strutting grounds and near water. In western mountains, it usually nests on north-facing slopes from 7,000 to 9,500 feet in elevation.

FOOD: Diet is 90 percent plant foods, including mast of oaks, beeches, and pines; fruits; seeds and grains; and greens of grasses and forbs. Also eats roots, tubers, and insects, especially grasshoppers and walking sticks.

REFERENCES: Boeker and Scott 1969, DeGraff et al. 1980, Hillestad 1973, Johnsgard 1975a, Korschgen 1967, Ligon 1946, Lindzey 1967, Markley 1967.

Montezuma Quail

Cyrtonyx montezumae
(formerly Harlequin Quail)



RANGE: Resident, at least locally, from central and southeastern Arizona, southern New Mexico, and extreme southwestern Texas south into Mexico.

STATUS: Locally fairly common.

HABITAT: Inhabits shaded grassy oak canyons, wooded mountain slopes with bunchgrass, and rocky ravines. Seldom goes far from pine-oak woodlands due to dependence on succulent, bulb-producing forbs that grow in pine-oak understory. Heavy grazing tends to reduce bulb-producing forbs, which are replaced by perennials that can provide adequate cover, but not the underground food reserves required during dry seasons.

SPECIAL HABITAT REQUIREMENTS: Ungrazed pine-oak woodlands.

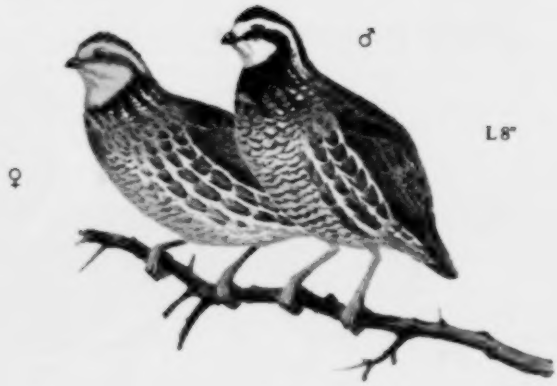
NEST: Conceals nest in a slight depression on the ground, at the base of trees, in grassy meadows, next to boulders, or under shrubs.

FOOD: Coveys typically feed in close groups, digging out bulbs of nutgrasses, wood sorrels, and other plants. Also eats acorns, seeds of legumes, grasses, and pines; fruits of shrubs and trees; and insects. Water is primarily obtained from food.

REFERENCES: Johnsgard 1975a, Leopold and McCabe 1957, Phillips et al. 1964, Terres 1980, Wallmo 1954.

Northern Bobwhite

Colinus virginianus
(formerly Bobwhite)



RANGE: Resident from southeastern Wyoming and central South Dakota to southern Ontario, southern New Hampshire and southern Maine, south through the central and eastern United States to Florida and southern Arizona into Mexico; introduced and established in western North America.

STATUS: Often common to abundant. Masked bobwhite extirpated in southern Arizona but is being reintroduced.

HABITAT: Inhabits open pastures, meadows with abundant weedy growth, and cultivated or fallow agricultural lands with hedgerows and dense brush, near open woodlands; avoids deep woods. In the Southwest, found in brushy canyons and hillsides or on dry grasslands with scattered mesquite and cactus. Prefers to winter in coveys (within several miles of breeding areas) in areas where dense cover of brushy thickets, hedgerows, or brush piles provide protection and abundant food resources.

SPECIAL HABITAT REQUIREMENTS: Open woodlands adjacent to fields and brushy cover. In winter, brushy cover within 150 feet of feeding areas.

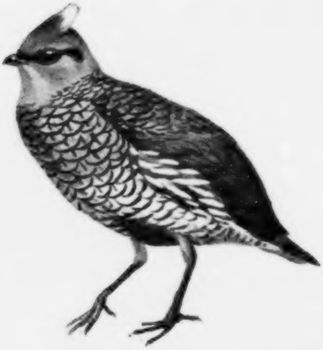
NEST: Builds a well-concealed nest on dry ground, usually in a moderately dense stand of herbaceous and grassy vegetation such as goldenrods, panic grasses, cheatgrass, broom sedge, and bluegrass, with scattered shrubs and briars, and patches of bare ground. Prefers areas where standing vegetation is usually less than 20 inches high and upright stems are separate enough for the birds to pass between.

FOOD: Consumes seeds, fruits, buds, and other plant parts that contribute 95 percent of the diet in winter and 70 percent in summer. Eats primarily green plant leaves in spring. Also eats insects that account for the remaining diet.

REFERENCES: DeGraff et al. 1980, Klimstra and Roseberry 1975, Reid and Goodrum 1979, Robel 1969, Rosene 1969, Tate and Tate 1982, Terres 1980.

Scaled Quail

Callipepla squamata



RANGE: Resident from south-central Arizona, northern New Mexico, east-central Colorado, and southwestern Kansas south through western Oklahoma, western half of Texas, and into Mexico. Introduced and established in central Washington and eastern Nevada.

STATUS: Common.

HABITAT: Inhabits dry, open country in valleys, plains, or foothills that have a mixture of bare ground, low herbaceous growth, and scattered brushy cover such as mesquite, soapweed, acacias, mimosas, scrub oaks, and other semi-desert shrubs. May be found on rocky, brushy slopes, draws, gullies, canyons, on sand sage grassland, and sometimes on shortgrass plains, pastures, and cultivated fields. If shrub cover is lacking, uses structures such as corrals, feedlots, and buildings for shade, resting areas, and escape cover. Winters in large coveys, usually within 1 1/4 miles from water.

SPECIAL HABITAT REQUIREMENTS: Desert grassland or desert scrub with a minimum of 1 loafing covert per 70 acres, and a source of water.

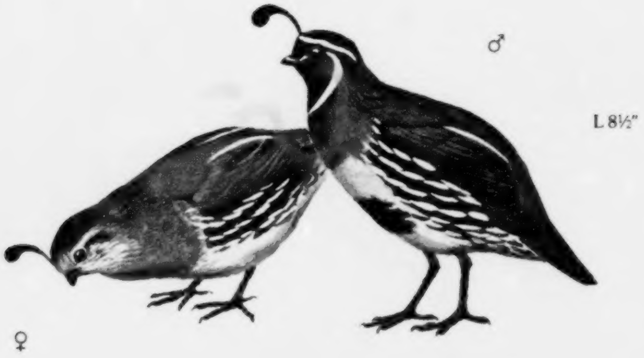
NEST: Nests in a slight hollow on the ground in a protected and shaded site. The nest may be under shrubs or among grasses, under old machinery or junk, or under overhanging rocks.

FOOD: Feeds primarily on plant seeds, with some fruits and insects.

REFERENCES: Ault and Stormer 1983; Goodwin and Hungerford 1977; Johnsgard 1973, 1975a; Kelso 1937; Schemnitz 1961; Stormer 1981.

Gambel's Quail

Callipepla gambelii



RANGE: Resident from east-central California, southern Nevada, southern Utah, western Colorado, and northwestern New Mexico south to Mexico and the Rio Grande Valley of western Texas.

STATUS: Common.

HABITAT: Inhabits desert scrub dominated by desert hackberry, mesquite, catclaw, buckhorn and cholla cactus; chaparral; and riparian areas; from sea level to elevations above 6,500 feet. Roosts in shrubs or low trees, where shade, brushy escape cover and succulent vegetation are available within about 1500 feet.

SPECIAL HABITAT REQUIREMENTS: Open water or succulent vegetation.

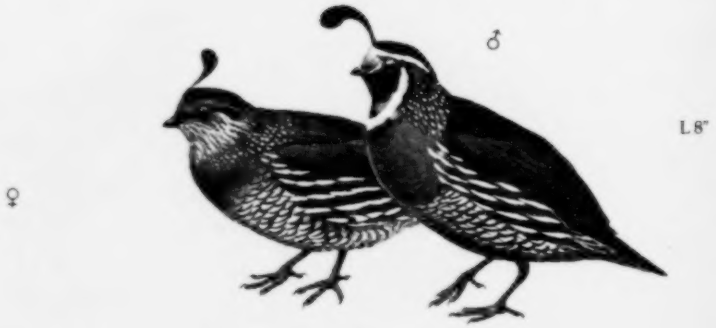
NEST: Nests on the ground in a scratched-out depression, usually well concealed under tall grass, mesquite, sage, or other shrubs. Occasionally nests above ground in woodpiles, rotted stumps, or abandoned nests of thrashers, roadrunners, or cactus wrens.

FOOD: Consumed a diet of 44 percent forb seeds, 14 percent shrub seeds, 5 percent animal foods, 3 percent grass seeds, and 34 percent leafy vegetation in one study. Eats a variety of foods including deer-vetch, filaree, mesquite, paloverde, lupine, white-thorn, mimosa, saguaro, calowrightia, and insects (largely ants.) Eats succulent foods to maintain body moisture.

REFERENCES: Goodwin and Hungerford 1977, Gorsuch 1934, Harrison 1979, Hungerford 1962, Johnsgard 1975a.

California Quail

Callipepla californica



RANGE: Resident from southern British Columbia, Washington, and western Idaho south through most of Oregon, California, and Utah to Baja California. Most populations north of southern Oregon and east of California apparently the result of introductions.

STATUS: Common over most of its range.

HABITAT: Tolerates a relatively broad variety of climates, from cool, wet coastal areas to arid desert. Lives in foothills and valleys where low trees or shrubs have openings of weeds and grass near water; also in coastal scrub, broken chaparral, edges of woodlands, riparian woodland, and on farms, ranches, and parks. Roosts from 15 to 25 feet up in dense growth of trees or shrubs at night; uses brushy thickets during the day for roosting and escape cover.

SPECIAL HABITAT REQUIREMENTS: *Brushy cover within 50 feet of feeding areas, and near a source of water.*

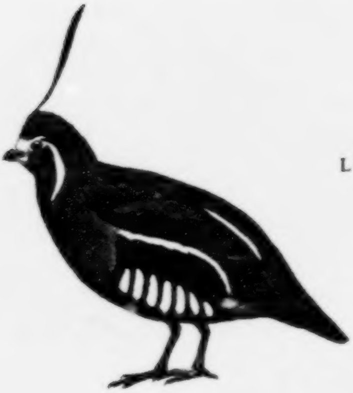
NEST: Builds nests in a slight depression on the ground or in tall, dense weedy or grassy cover, well concealed at the base of a tree or shrub, near a fallen tree or under a brush pile. Nests often located along fence rows, in road ditches, or in pastures and close to water.

FOOD: Consumes mostly seeds and leafy green vegetation, with only small amounts of animal food in the spring and summer.

REFERENCES: Bevier in Farrand 1983a, Browning 1977, Emlen and Glading 1945, Gutierrez 1979-1980, Leopold 1977, Sumner 1935, Terres 1980.

Mountain Quail

Oreortyx pictus



RANGE: Resident from southwestern British Columbia, western and southern Washington, and central Idaho south through the mountains of California and northern and western Nevada to Baja California.

STATUS: Common.

HABITAT: Inhabits open montane forests with a well-developed brushy understory, steep slopes around edges of mountain meadows, and in logged or burned-over forests, from 1,500 to 10,000 feet. In California, breeds from chaparral up to lodgepole pine forests, preferring areas with much shrubbery and low percent canopy cover. During winter, moves to a lower elevation and occupies a habitat of mixed trees, brush, and herbs that produce mast and seeds.

SPECIAL HABITAT REQUIREMENTS: Water during the breeding season.

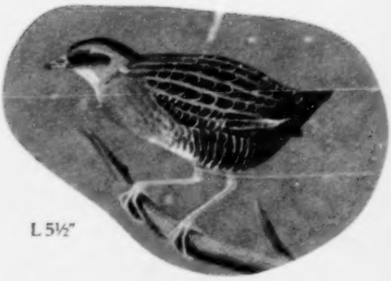
NEST: Nests on the ground, in a well-concealed site, often under fallen pine branches, in weeds or shrubs, at the base of large trees, or beside large rocks. Nests are always near water.

FOOD: Forages on the ground and in low shrubs for food. Consumes leaves, flowers, and buds of succulent vegetation; mast; pine seeds; tubers, roots, and bulbs; seeds and fruits; and insects.

REFERENCES: Gutierrez 1979-1980, Johnsgard 1975a, Ormiston 1966, Terres 1980, Verner and Boss 1980.

Yellow Rail

Coturnicops noveboracensis



RANGE: Breeds locally from northwestern Alberta and southern Mackenzie to southern Quebec and New Brunswick south to southern Alberta, North Dakota, southern Wisconsin, southern Ontario, Massachusetts, and Connecticut. Winters from coastal North Carolina south to southern Florida, west along the Gulf Coast to central and southeastern Texas; in Mexico; and locally from Oregon south to southern California.

STATUS: Depending on locality, common, rare, or casual.

HABITAT: Highly secretive; spends most of its time beneath dense, rank vegetation. Inhabits shallow, freshwater, grassy, and sedge marshes and wet meadows. In fall and winter, lives in high margins of fresh and saltwater marshes, savannahs, grainfields, hayfields, and among garden crops.

SPECIAL HABITAT REQUIREMENTS: Marshes or wet meadows.

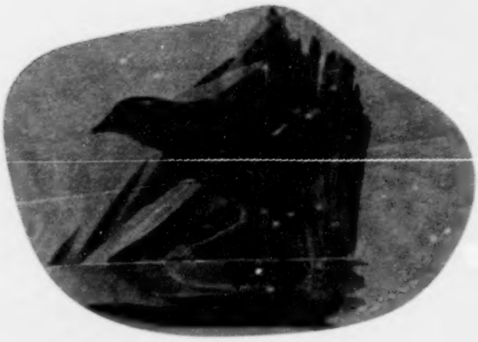
NEST: Prefers to nest in drier portions of marsh, usually where ground is damp but there is no standing water. Conceals nest in dense clumps of marsh grasses, with surrounding vegetation forming canopy over the nest.

FOOD: Eats small snails, insects, seeds of sedges, grasses, and clover leaves (very little has been reported on food habits).

REFERENCES: Anderson 1977, Devitt 1939, Terres 1980, Walkinshaw 1939.

Black Rail

Laterallus jamaicensis



L 4½"

RANGE: Breeds locally along the Atlantic Coast from New York south to central Florida; on the Gulf Coast in eastern Texas and western Florida; in Kansas, and from California to South America. Winters along the coast of California from the breeding range north to Tomales Bay; in the Imperial and lower Colorado River Valleys of southeastern California; along the Gulf Coast from southeastern Texas east to Florida; and in South America.

STATUS: Locally common.

HABITAT: Inhabits coastal salt marshes, and occasionally inland freshwater marshes and wet meadows. Uses grainfields and hay meadows to some extent. Prefers higher portions of a marsh, where vegetation is rank and dense and the ground is damp. Life history poorly known; spends much of its time under matted grasses in high salt marshes.

SPECIAL HABITAT REQUIREMENTS: Marshes with areas of dense, but not necessarily tall, cover and damp soil.

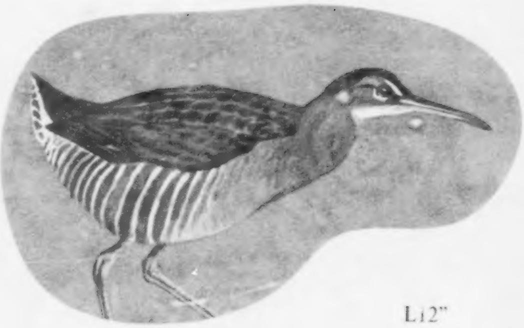
NEST: Completely hides nest in clumps of marsh grass or at the base of glasswort, in or along the edge of a marsh. Usually places nest on matted dead grass, but sometimes directly on damp ground.

FOOD: Probably feeds mainly on invertebrates.

REFERENCES: DeGraff et al. 1980, Pough 1951, Terres 1980, Todd 1977.

Clapper Rail

Rallus longirostris



L12"

RANGE: Resident along the Atlantic and Gulf Coasts from Connecticut south to southern Florida and west to southern Texas; locally along the Pacific Coast from central California south to South America; and in the interior of southeastern California and southwestern Arizona at the southern end of the Salton Sea and in the lower Colorado River Valley (northernmost populations tend to be partially migratory).

STATUS: Abundant in the east, local in California. Some western subspecies are listed as endangered.

HABITAT: Primarily inhabits coastal salt marshes, especially tidal marshes bordered by shallow bodies of salt or brackish water. One subspecies inhabits freshwater marshes along the Colorado River.

SPECIAL HABITAT REQUIREMENTS: Dense growths of cordgrass or needlerush, with deep soft soils.

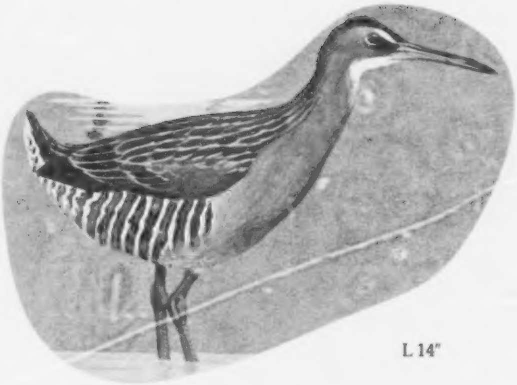
NEST: Builds nest 8 to 12 inches above ground and near water in salt marsh cordgrass, in marsh elder, or other marsh vegetation that is more than 2 feet tall, with a canopy of vegetation. Locates nest so it will not be submerged by high tide.

FOOD: Prefers to feed on mudflats or along muddy shores of creeks at low tide by probing and gleaning. Eats fiddler crabs, other small crabs, crustaceans, snails, shellfish, aquatic insects, and some seeds.

REFERENCES: Adams and Quay 1958, DeGraff et al. 1980, Johnsgard 1975a, Kozicky and Schmidt 1949, Mangold 1977, Stone 1937.

King Rail

Rallus elegans



RANGE: Breeds locally from eastern Nebraska and central Minnesota to Connecticut south through northwestern and central Kansas, central Oklahoma, and most of the eastern United States to western and southern Texas, central Mississippi and Alabama, and southern Florida. Winters primarily from southern Georgia, Florida, the southern portions of the Gulf States, and southern Texas south to Mexico.

STATUS: Uncommon; population declining in Midwest prairies, low elsewhere.

HABITAT: Inhabits coastal, and inland brackish and freshwater marshes with abundant vegetation (especially sedges, bulrushes, and cattails), roadside ditches, tidal rivers, ricefields, and upland fields near marshes. Forages and nests along waterways made by the muskrat (distribution coincides closely with that of the muskrat). Not known to breed in salt marshes, but wintering birds inhabit coastal brackish, salt (rarely), and freshwater marshes.

SPECIAL HABITAT REQUIREMENTS: Wetlands with abundant vegetation and fairly stable water levels during the breeding season.

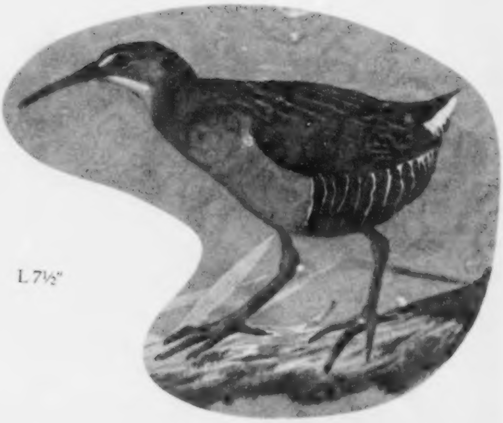
NEST: Conceals nests with a cone-shaped or round canopy of vegetation overhead; usually locates nests 6 to 18 inches above shallow water on grass or sedge tussocks or on hummocks among cattails.

FOOD: Feeds on mud flats at low tide, in open roadside ditches, or in very shallow water, 2 to 3 inches deep. Primarily eats crustaceans, especially crayfish and aquatic insects; also takes grasshoppers, crickets, fishes, frogs, grains (especially rice in winter), and seeds of aquatic plants.

REFERENCES: Bateman 1977, DeGraff et al. 1980, Johnsgard 1975a, Meanley 1969, Tate and Tate 1982.

Virginia Rail

Rallus limicola



L 7½"

RANGE: Breeds locally from southern British Columbia and northwestern Alberta to southern Quebec, New Brunswick, and southwestern Newfoundland south to Baja California, west-central Texas, Kansas, central Ohio, western Virginia, and along the Atlantic Coast to North Carolina; also in central Louisiana and northern Alabama. Winters from southern British Columbia and western Washington south to Baja California; and from central Texas, the Gulf Coast, and coastal North Carolina south locally to Costa Rica; casual in interior North America.

STATUS: Common.

HABITAT: Inhabits freshwater marshes, marshy borders of lakes and streams, and occasionally brackish and salt marshes. Prefers areas with shallow water and abundant emergent vegetation.

SPECIAL HABITAT REQUIREMENTS: Wetlands with sedge and cattail edge.

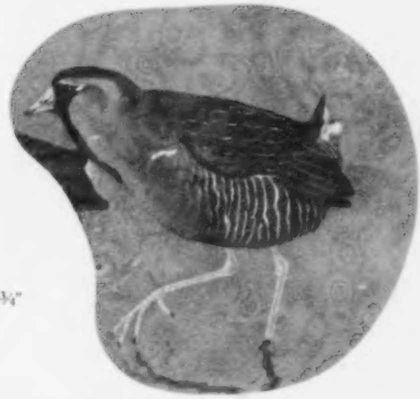
NEST: Usually constructs nests in cattails or sedges a few inches above shallow water, that are often covered with a loose canopy of vegetation and well attached to surrounding vegetation or on a clump of grass or tussock.

FOOD: Consumes a diet that is about two-thirds insects. Also eats small fishes, frogs, mollusks, crustaceans, leeches, and earthworms. Climbs easily on reeds and in bushes to reach seeds and berries, and also eats grass seeds, duckweeds, wild oats, and rice.

REFERENCES: Berger 1951, DeGraff et al. 1980, Horak 1970, Johnsgard 1975a, Low and Mansell 1983, Walkinshaw 1937, Zimmerman 1977.

Sora

Porzana carolina



L 6¾"

RANGE: Breeds from southern Yukon and west-central and southwestern Mackenzie to west-central and southern Quebec and southwestern Newfoundland, south locally to Baja California, central Arizona, New Mexico, central Illinois, and Maryland. Winters from central California to the Gulf Coast and southern South Carolina south to South America; occasionally north to southern Canada.

STATUS: Common.

HABITAT: Prefers freshwater marshes, but also inhabits brackish and salt marshes, ponds, swamps, bogs, wet grassy meadows,and sloughs, especially those with sedges and cattails. In late summer, concentrates in areas where food is plentiful such as in rice fields or other seed-producing areas.

SPECIAL HABITAT REQUIREMENTS: Wetlands with abundant, dense vegetation.

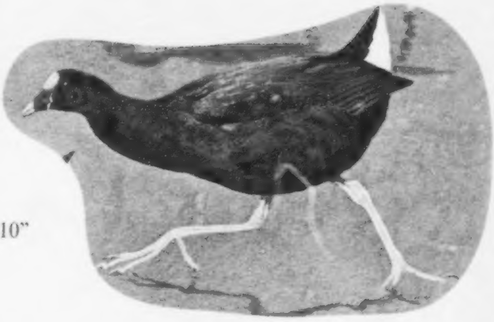
NEST: Constructs a well-concealed nest that may be fastened to or supported by reed stems on a raised platform of vegetation. Locates nest 6 inches to over a foot above water, or occasionally on the ground. Generally nests over water 6 to 8 inches deep, preferably among sedges.

FOOD: Primarily feeds on small mollusks and insects except in the fall; then relies heavily on seeds in freshwater habitats and animal foods in brackish areas. Also eats insects, mollusks, worms, crustaceans, and small tadpoles. Eats seeds and leaves for most of the vegetative portion of the diet.

REFERENCES: DeGraff et al. 1980, Horak 1970, Johnsgard 1975a, Low and Mansell 1983, Meanley 1965, Odom 1977, Walkinshaw 1940, Webster 1964.

Purple Gallinule

Porphyrula martinica



L10"

RANGE: Breeds along the Atlantic Coast from Maryland and Delaware south through Central America to South America, and in eastern and southern Texas, the Gulf States, and Florida; locally in southern Illinois, western Tennessee, and central Ohio. Winters from southern Texas, Louisiana, and Florida south throughout remainder of breeding range.

STATUS: Uncommon throughout breeding range.

HABITAT: Characteristically inhabits marshy wetlands with a variety of marsh plants, especially where pickerelweed and plants with floating leaves, such as water lilies, are abundant. Walks freely on lily pads and other floating vegetation, alights readily on bushes, and climbs about in branches over water.

SPECIAL HABITAT REQUIREMENTS: Freshwater marshes and swamps, ponds, and channels of slow moving water with well-vegetated edges.

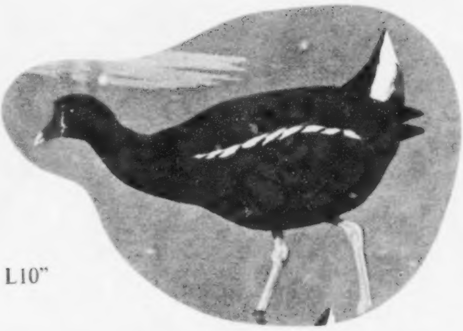
NEST: Usually nests on an island of floating water plants. Builds a well-concealed nest, sometimes suspended and woven into marsh vegetation or willow thickets up to 6 feet above shallow water.

FOOD: Consumes both plant and animal foods, including the seeds of rice, duckweed, wild millet, and other aquatic plants; also eats mollusks, aquatic insects, snails, and worms.

REFERENCES: Cramp and Simmons 1980, Holliman 1977, Johnsgard 1975a, Low and Mansell 1983, Terres 1980.

Common Moorhen

Gallinula chloropus
(formerly Common Gallinule)



L10"

RANGE: Breeds locally in California, central Arizona, and northern New Mexico, and from central Minnesota and southern Wisconsin to Vermont and Massachusetts, south to South America. Winters in eastern North America from South Carolina and the Gulf Coast southward, elsewhere throughout the breeding range, occasionally north to Utah, Minnesota, southern Ontario, and New England.

STATUS: Locally common.

HABITAT: Inhabits freshwater marshes, lakes, ponds, slow-flowing streams and rivers, and nearly any body of water with emergent vegetation such as cattails, bulrushes, reeds, sedges, and burreeds growing in water over one foot deep. Also inhabits rice fields in the South.

SPECIAL HABITAT REQUIREMENTS: Emergent vegetation growing in water 1 to 3 feet deep and areas of open water.

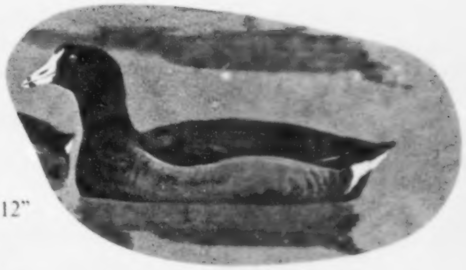
NEST: Builds nests in emergent vegetation 2 to 6 feet high, on a hummock or other clump of vegetation over water that is 1 to 3 feet deep. Locates nest at water level or up to 2 feet above water, concealing it with a canopy of surrounding plants. Occasionally nests in shrubs such as willow or alder. Builds brood platforms or uses muskrat houses or platforms built by coots.

FOOD: Dives, dabbles, or wades while foraging; eats mainly leaves and stems of underwater plants, duckweed, leaves of grasses and herbs, and seeds and berries. Occasionally eats insects, earthworms, slugs, snails, and rarely aquatic vertebrates such as tadpoles or small fishes.

REFERENCES: DeGraff et al. 1980, Fredrickson 1971, Johnsgard 1975a, Krauth 1972, Low and Mansell 1983, Strohmeyer 1977.

American Coot

Fulica americana



L12"

RANGE: Breeds from east-central Alaska and southern Yukon to southwestern Quebec, southern New Brunswick, and Nova Scotia south locally to Central America. Winters from southeastern Alaska and British Columbia south through the Pacific States, and from Colorado and northern Arizona to the lower Mississippi and Ohio Valleys, and Maryland south to the southeastern United States and Central America.

STATUS: Common.

HABITAT: Inhabits marshes, lakes, ponds, sloughs, potholes, and marshy borders of creeks and rivers, or ephemeral habitats when conditions are suitable. Prefers wetlands with a good interspersion of emergent vegetation, especially cattails and bulrushes. During migration, found on rivers, lakes, ponds, reservoirs, or sewage lagoons, and on freshwater or brackishwaters in winter.

SPECIAL HABITAT REQUIREMENTS: Freshwater wetlands, with shallow water 1 to 4 feet deep and emergent vegetation interspersed with areas of open water.

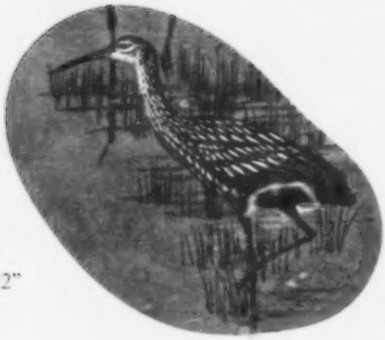
NEST: Constructs floating display platforms, egg nests, and brood nests located in and anchored to emergent vegetation, usually within 4 feet of open water and over water 1 to 4 feet deep. May also nest on top of a muskrat house.

FOOD: Primarily dabbles and grazes, but also dives. Eats a variety of plant foods, which make up 89 percent of the diet. During winter often grazes on pastures and cultivated fields. Eats mostly pondweeds, sedges, algae, grasses (especially wild rice), and other plants; also eats fishes, tadpoles, worms, crustaceans, spiders, beetles, dragonflies, and bugs.

REFERENCES: Cramp and Simmons 1980; DeGraff et al. 1980; Fjeldsa 1977; Fredrickson 1970, 1977; Gullion 1954; Johnsgard 1975a; Jones 1940; Kiel 1955.

Limpkin

Aramus guarauna



L22"

RANGE: Resident from southeastern Georgia and northern Florida (east of the Apalachicola River) south through peninsular Florida, Central America, and South America.

STATUS: Locally common.

HABITAT: Inhabits freshwater cypress swamps, marshes of saw grass or bulrushes, bayous, sloughs, and wooded marshy rivers or streams. Sometimes perches in tops of the tallest trees or on shrubs.

SPECIAL HABITAT REQUIREMENTS: Freshwater marshes with dense vegetation or trees and shrubs for nesting.

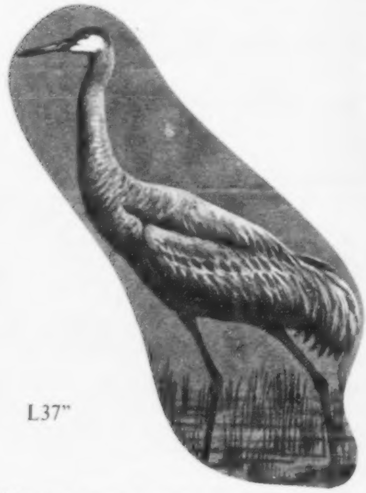
NEST: Commonly nests among clumps of tall grasses or other aquatic plants above shallow water. Sometimes nests 5 to 8 feet above the ground in bushes, vines, or trees along banks of streams, or on platforms just above water in dense vegetation.

FOOD: Probes for food in shallow water or in soft mud on mud flats for freshwater snails, especially Pomacea; also eats mussels, frogs, lizards, worms, insects, and a few seeds.

REFERENCES: Bent 1926, Harrison 1975, Oberholser 1974a, Sykes in Farrand 1983a, Terres 1980.

Sandhill Crane

Grus canadensis



L37"

RANGE: Breeds from western and central Alaska and northern Yukon to Baffin Island, south locally to southern Alaska, northeastern California, Colorado, southern Minnesota, southern Michigan, and western Quebec. Resident from southern Mississippi, southern Alabama, and southern Georgia south to Florida. Winters from central California and southeastern Arizona to the Gulf Coast and southern Georgia south to Mexico.

STATUS: Northern subspecies (Lesser, Canadian, and Greater) are migratory and locally common, while nonmigratory subspecies (Cuban, Florida, and Mississippi) are threatened or endangered.

HABITAT: Inhabits prairies, tundra, open pinewood flats, and other open areas. Breeds in or near shallow marshes, bogs, sloughs, margins of lakes, ponds, and river deltas. In mountainous regions, inhabits isolated, well-watered river valleys, marshes, and meadows. Occasionally inhabits relatively small marshes and patches of prairie in forested country. During winter, roosts in flocks at night on low damp ground or in shallow water, and flies to feeding grounds at dawn.

SPECIAL HABITAT REQUIREMENTS: Shallow wetlands adjacent to a meadow, cultivated fields, or open woodlands and free of human disturbance.

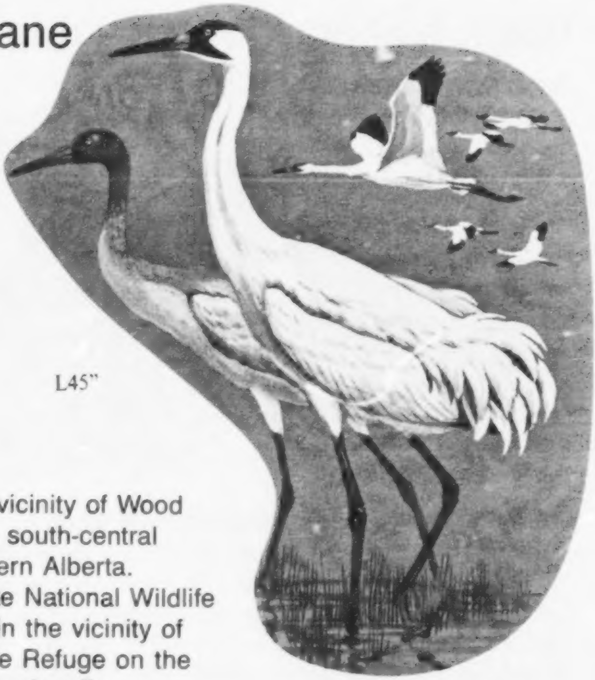
NEST: Usually nests in or near shallow wetlands adjacent to feeding grounds. Nests are located on a mound of emergent vegetation, sticks, grass, moss, or mud among rushes, sedges, grasses or other tall, dense vegetation. Pairs mate for life.

FOOD: Feeds in cultivated fields, pastures, wet meadows, and marshes. Eats wheat, corn, alfalfa, sorghum, barley, roots and tubers, berries, small mammals, snakes, frogs, lizards, crickets, and grasshoppers.

REFERENCES: Archibald in Farrand 1983a, Cramp and Simmons 1980, Johnsgard 1975a, Lewis 1977, Terres 1980, Walkinshaw 1949.

Whooping Crane

Grus americana



RANGE: Breeds in the vicinity of Wood Buffalo National Park in south-central Mackenzie and in northern Alberta. Introduced at Grays Lake National Wildlife Refuge, Idaho. Winters in the vicinity of Aransas National Wildlife Refuge on the Gulf Coast of Texas, occasionally northeast to southern Louisiana.

STATUS: Endangered, numbering fewer than 150 individuals in the traditional wild flock, about 13 in the introduced Rocky Mountain flock, and about 55 in captivity.

HABITAT: Inhabits marshy areas interspersed with shallow potholes having soft marly bottoms and a pH range of 7.6 to 8.3. Primarily inhabits aspen parkland, but also in northern coniferous forest, shortgrass plains, northern mixed forest, river deltas, and tundra. Winters on tallgrass prairies, salt flats, coastal marshes, lagoons, and brackishwater areas.

SPECIAL HABITAT REQUIREMENTS: Large, shallow wetlands that provide visibility over a wide area and are free of human disturbance.

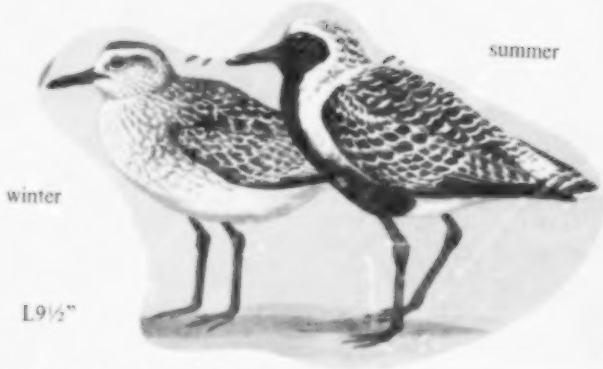
NEST: Nests on a mound of bulrushes in shallow water, on islands or along shores of large wetlands where there is a heavy cover of bulrushes. Pairs mate for life, and return to the same general area each year but not to the same nest site.

FOOD: In winter, primarily feeds on blue crabs, but also eats aquatic insects, freshwater minnows, shrimps, crayfishes, marine worms, snails, clams, sprouting corn, acorns, grasses, sedges, and other plants. (Foods of other seasons have not been well documented.)

REFERENCES: Allen 1952, Archibald in Farrand 1983a, Mackenzie 1977, McNulty 1966, Novakowski 1966, Terres 1980.

Black-bellied Plover

Pluvialis squatarola



RANGE: Breeds from northern Alaska south to western Alaska, and from northwestern Mackenzie and Banks Island, southern Melville, Devon, and western and southern Baffin Islands south to the Yukon River, north-central Mackenzie, northern Keewatin, and Southampton and Coats Islands. Winters primarily in coastal areas from southern British Columbia and New Jersey south along both coasts of the United States to South America.

STATUS: Common.

HABITAT: Breeds on moist to dry upland rolling tundra. In other seasons frequents mudflats, beaches, shores of ponds and lakes, flooded fields, and salt marshes. Commonly associates with other shorebirds, especially willets, golden plovers, knots, and curlews.

SPECIAL HABITAT REQUIREMENTS: Tundra during breeding season.

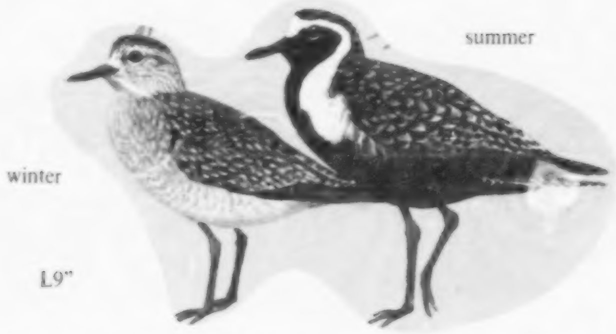
NEST: Nests in a depression on the ground in relatively dry sites on or near a ridge, often in a prominent area affording a wide view. Usually locates nest on gravelly ground, sometimes with large boulders or with sparse vegetation of lichens, dryad, saxifrage, willows, sedges, or grasses.

FOOD: Feeds along seacoasts on broad tidal sand flats and mud flats and in salt marshes, or inland around lakeshores, in meadows and upland pastures, or in plowed fields. Diet includes marine worms, small mollusks, crustaceans, marine insects, grasshoppers, locusts, cutworms, grubs, beetles, earthworms, and some seeds and berries.

REFERENCES: Bent 1929, Hussell and Page 1976, Palmer 1967, Terres 1980.

Lesser Golden-Plover

Pluvialis dominica
(formerly American Golden Plover)



RANGE: Breeds from northern Alaska and northern Yukon to Banks, Devon, and northern Baffin Islands south to central Alaska, northwestern British Columbia, southern Keewatin, northern Ontario and Southampton, and southern Baffin Islands. Winters in southern South America.

STATUS: Common, once abundant; population decline due to hunting at the end of the 19th century but is recovering.

HABITAT: Breeds on arctic and subarctic tundra beyond treelimit, usually where the ground cover is lichens and mosses. In migration, occupies short-grass pastures, plowed fields, and burned-over meadows, or beaches and mudflats in coastal areas.

SPECIAL HABITAT REQUIREMENTS: Dry, grassy tundra.

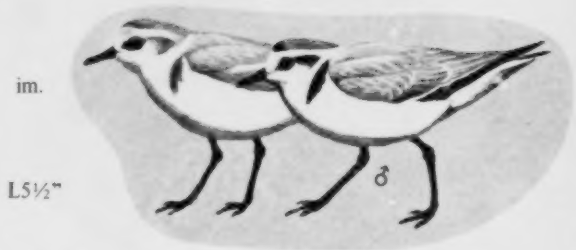
NEST: Nests in a depression on dry ground, preferably on higher sites such as banks of gullies or streams but not necessarily near water. Eggs are difficult to see against tundra. Young birds quickly move to wetter areas such as sphagnum swamps.

FOOD: Feeds in rolling pasturelands with short, scanty grass, on prairies, plains, plowed land, open sand, or mud flats. Mostly eats insects, especially grasshoppers and crickets. Also eats grubs, cutworms, caterpillars, beetles, spiders, mollusks, small crustaceans, small fishes, crowberries, and blueberries.

REFERENCES: Bent 1929, Cramp and Simmons 1983, Palmer 1967, Terres 1980.

Snowy Plover

Charadrius alexandrinus



RANGE: Breeds along the Pacific Coast from southern Washington to Baja California, and locally from southern Oregon, western Nevada, southwestern Montana, central Kansas, and north-central Oklahoma south to southeastern California and north-central Texas; also along the Gulf Coast from Florida west to Texas. Winters on islands and in coastal areas from northern Oregon and the Gulf Coast south to Costa Rica.

STATUS: Locally common; suffering a serious decline in the southern and middle Pacific Coast regions.

HABITAT: Inhabits dry sandy coastal beaches above the wash of the tides, sand spits or bars separating the ocean from coastal wetlands, estuarine margins, alkali flats, dry lake beds, or the shores of salt ponds and alkali lakes. Prefers open habitats; avoids thick vegetation and narrow beaches littered with driftwood or backed by bluffs where it might be trapped by high water.

SPECIAL HABITAT REQUIREMENTS: Open nesting habitat, preferably near water.

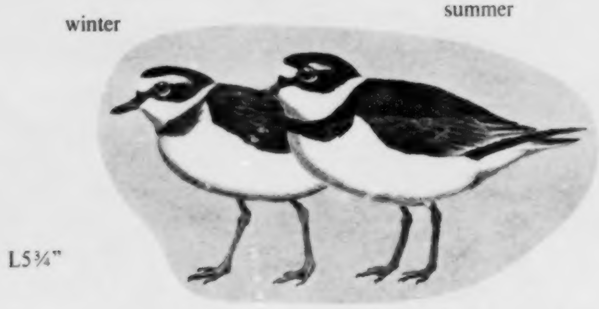
NEST: Nests singly or sometimes in loose colonies in flat areas devoid of, or sparsely covered with, vegetation or driftwood. Generally nests near water, but occasionally farther away if no formidable barrier is between the nest and water, in a scrape on the ground, usually among small rocks, kelp, or other objects.

FOOD: Forages on wet sand of beaches, at the surf line, or along muddy or alkaline shores of ponds and lakes inland. Food is mostly small crustaceans, marine worms, other minute marine animals, beetles, flies, and other insects.

REFERENCES: Bent 1929, Harrison 1979, Page and Stenzel 1981, Palmer 1967, Tate and Tate 1982, Terres 1980, Wilds in Farrand 1983a.

Semipalmated Plover

Charadrius semipalmatus



RANGE: Breeds from northern Alaska, northern Yukon, Banks, Victoria and central Baffin Islands to the northern Labrador Coast, south to western Alaska, southwestern and central British Columbia, northern Manitoba, central Quebec, and southern Nova Scotia. Nonbreeding birds often summer in the wintering areas south to Panama. Winters primarily in coastal areas from central California, the Gulf Coast, and South Carolina south to South America.

STATUS: Common.

HABITAT: Found during spring and fall migration on beaches, mudflats, lakeshores, riverbanks, freshly plowed fields, shallow marshes, and peat banks. It breeds in dry Arctic tundra, sometimes quite far from water, and prefers lichen-grown gravelly tundra or areas of rubble and patches of stranded debris. Avoids grassy areas.

SPECIAL HABITAT REQUIREMENTS: Level, well-drained gravelly tundra.

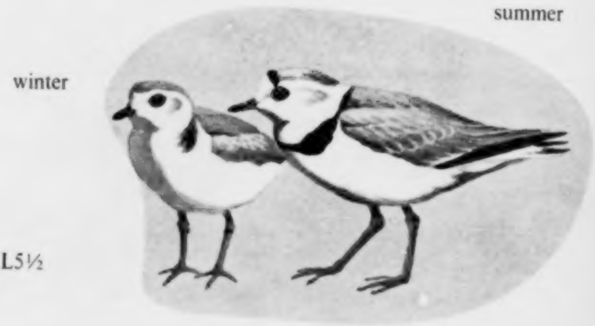
NEST: Nests in unsheltered scrapes on level ground in gravelly or sandy soil, or in moss or lichens and above the high-water line in loose colonies.

FOOD: Prefers to feed in shallow streams or mudbars in tundra ponds, but also forages on tidal flats. Diet includes marine worms, mollusks, small crustaceans, larvae of midges and other insects, ants, beetles, grasshoppers, and spiders.

REFERENCES: Cottam and Hanson 1938, Palmer 1967, Sutton and Parmelee 1955, Terres 1980.

Piping Plover

Charadrius melodus



RANGE: Breeds locally from south-central Alberta to south-central Manitoba, south to eastern Montana and central and eastern Nebraska; in the Great Lakes region from northern Michigan and southern Ontario south to the southern shores of Lake Michigan and Lake Ontario; and in coastal areas from Newfoundland south to Virginia. Winters on the coast from South Carolina south to Florida and west to eastern Texas, sparsely in Bahamas and Greater Antilles.

STATUS: Endangered; numbers are slowly declining.

HABITAT: Inhabits exposed, sparsely vegetated sandy shores and islands of shallow lakes and ponds, dry sandy ocean beaches, higher portions of strand near dunes, and large open sandy areas, especially where scattered grass tufts are present. In winter it is found on beaches, margins of lagoons, and areas of rubble.

SPECIAL HABITAT REQUIREMENTS: Unspoiled, undeveloped beaches with little vegetation.

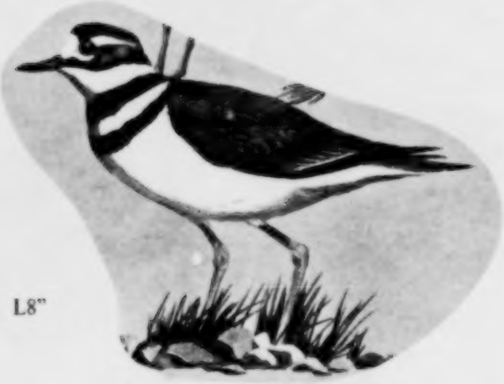
NEST: Nests in a hollow in sand, well beyond high tide on ocean beaches, on raised sandspits, or on the lower slopes of dunes. Generally nests on narrow beaches as little as 6 feet wide. May sometimes nest under tufts of grass. Adults tend to return to the same breeding area year after year.

FOOD: Forages on beaches, along margins of watercourses, and on tidal sandflats for marine worms, insects such as fly larvae and beetles, crustaceans, and mollusks.

REFERENCES: Bent 1929, Cairnes 1982, DeGraff et al. 1980, Harrison 1979, Palmer 1967, Tate and Tate 1982, Terres 1980, Wilcox 1959.

Killdeer

Charadrius vociferus


L8"

RANGE: Breeds from east-central and southeastern Alaska and southern Yukon to central Quebec and western Newfoundland, south to Mexico. Winters from southern British Columbia across the central United States to New England and south throughout the remainder of North America to South America.

STATUS: Common throughout range.

HABITAT: Indiscriminately occupies open areas, but favors open dry uplands, meadows, pastures, and disturbed or heavily grazed areas where grass is short, sparse, or absent. In winter, inhabits open fields, beaches, along watercourses, and on mudflats.

SPECIAL HABITAT REQUIREMENTS: Open areas with closely cropped or sparse vegetation.

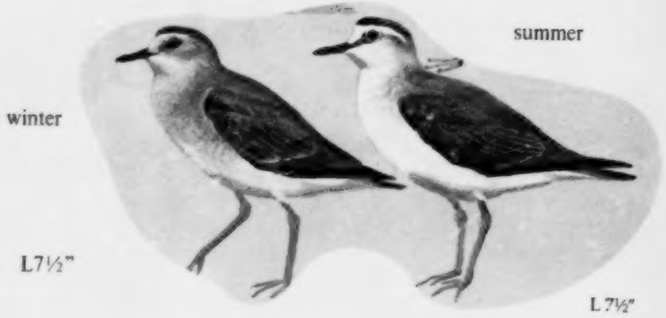
NEST: Nests in a scrape on gravelly or bare ground, occasionally on a flat or gently sloping roof of a building, often with a few pebbles, grasses, or weeds in the scrape.

FOOD: Prey is snatched or gleaned from the surface of dry or moist ground or from very shallow water. Eats a diet that is mainly insects, especially grasshoppers, beetles, and dragonflies, but also includes centipedes, spiders, worms, snails, crayfish, and weed seeds.

REFERENCES: Cramp and Simmons 1983, DeGraff et al. 1980, Palmer 1967, Terres 1980.

Mountain Plover

Charadrius montanus



RANGE: Breeds from extreme southern Alberta and northern Montana south to central and southeastern New Mexico, western Texas, western Oklahoma, and western Missouri. Winters from central California, southern Arizona, and central and coastal Texas south to Mexico.

STATUS: Common but declining.

HABITAT: A species of the high plains and arid regions of western valleys and hills, usually found far from water. Generally avoids mountainous areas and prefers areas dominated by blue grama grass and buffalo grass. In winter, congregates in flocks of 15 to several hundred on alkali flats, plowed ground, grazed pastures, or other open arid habitats.

SPECIAL HABITAT REQUIREMENTS: Shortgrass prairie and arid plains.

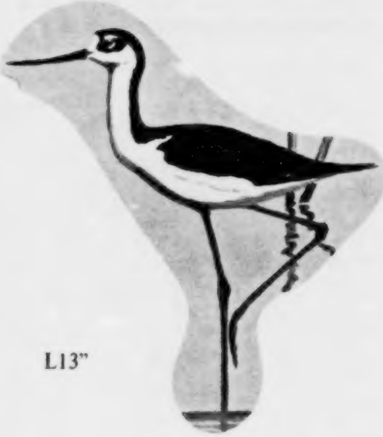
NEST: Nests in scrapes on flat ground, preferably in areas of blue grama-buffalo grass with scattered clumps of cacti and western wheat grass. Avoids tall vegetation.

FOOD: Consumes mostly, if not entirely, insects caught on the dry plains and prairies, primarily grasshoppers, crickets, beetles, and flies.

REFERENCES: Bent 1929, Garrett in Farrand 1983a, Graul 1975, Palmer 1967, Terres 1980.

Black-necked Stilt

Himantopus mexicanus



L13"

RANGE: Breeds locally on the Atlantic Coast from southern New Jersey south to southern Florida, and from southern Oregon, southern Colorado, central Kansas, the Gulf Coast of Texas, and southern Louisiana south to South America. Winters from central California, the Gulf Coast of Texas and Louisiana, and southern Florida south to South America.

STATUS: Common.

HABITAT: Inhabits shallow freshwater and brackish ponds, alkaline lakes, wet meadows, open marshes, and flooded fields and pastures. Commonly associates with other shorebirds, especially avocets, godwits, and curlews.

SPECIAL HABITAT REQUIREMENTS: Shallow wetlands.

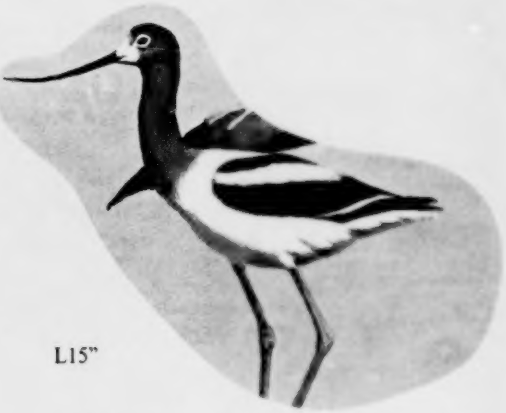
NEST: Nests in slight depressions on the ground, on sandy or gravelly shores, or along drier margins of ponds and lakes, or on deep, well-built, floating platforms over shallow water in loose colonies. Also nests on hummocks, on small islands, or under clumps of vegetation and may be well concealed or in the open.

FOOD: Forages along muddy shores and in shallow waters for dragonfly nymphs, caddis flies, mayfly nymphs, flies, billbugs, mosquito larvae, grasshoppers, crayfish, and snails. Also consumes small fishes and seeds of aquatic and marsh plants.

REFERENCES: Bent 1927, Palmer 1967, Terres 1980, Wilds in Farrand 1983a.

American Avocet

Recurvirostra americana



L15"

RANGE: Breeds from southeastern British Columbia and central Alberta to Minnesota, south locally to southern California, northern Utah, and southern New Mexico, and east to central Kansas and coastal Texas. Winters mostly in coastal lowlands from northern California and southern Texas south to Mexico, and locally in southern Florida.

STATUS: Common.

HABITAT: Inhabits the borders of muddy saline, alkaline, and freshwater ponds, lakes, and marshes, particularly favoring shallow alkaline lakes, wet meadows and pastures with scattered open pools. Commonly associates with black-necked stilts, godwits, and lesser yellowlegs.

SPECIAL HABITAT REQUIREMENTS: Wetlands bordered by open flats or areas with scattered tufts of grass.

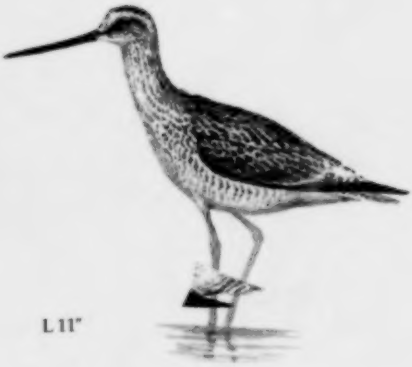
NEST: Eggs are laid in a scrape on the ground. Nests in colonies on dry, sun-baked mudflats, near water, on low, gravelly or sandy islands with scant vegetation, or in marshes bordering shallow lakes. If the water level rises to flood the nest, adds vegetation to raise the nest above the level of water.

FOOD: Gathers food by stirring up water for seeds, aquatic insects, and small crustaceans, and by probing in soft mud. Consumes dragonfly nymphs, back swimmers, water boatmen, beetles, grasshoppers, crickets, weevils, flies and their larvae, centipedes, small snails, small crustaceans, small fishes, and seeds of marsh and aquatic plants.

REFERENCES: Bent 1927, Gibson 1971, Harrison 1979, Low and Mansell 1983, Palmer 1967, Terres 1980, Wilds in Farrand 1983a.

Greater Yellowlegs

Tringa melanoleuca



RANGE: Breeds from southern Alaska, southwestern Mackenzie, and south-central British Columbia east across the northern and central portions of the Canadian Provinces to central and southern Labrador, Newfoundland, and northeastern Nova Scotia. Nonbreeding birds sometimes summer on the wintering grounds, especially along the coasts of the United States. Winters from Oregon and southern Nevada to southern Texas, the Gulf Coast, and coastal South Carolina south to South America.

STATUS: Common.

HABITAT: Found in the Nearctic boreal region to the edge of subarctic coniferous forest zone, where it inhabits swampy muskegs or bogs with scattered trees, wet clearings and pools, or tundra. Perches freely when breeding, often alighting on tops of trees, bushes, or dead stubs. Outside the breeding season, frequents shallow fresh, brackish, and salt waters, mudflats, river bars, tidal marshes and pools, rain pools in fields, and damp grassy meadows.

SPECIAL HABITAT REQUIREMENTS: Muskeg and tundra.

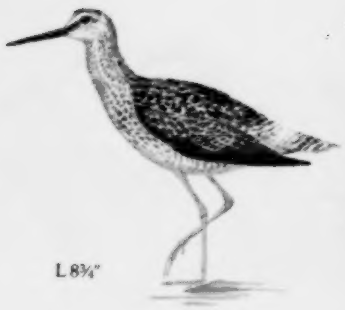
NEST: Nests in a depression on the ground, usually near trees, logs, or stumps, on a dry wooded ridge or on recently burned ground, and normally near water.

FOOD: Feeds by picking, snatching, skimming, and sweeping, but not by probing. Favors mudflats and shallow borders of lakes and streams for feeding sites, where it finds small fishes, tadpoles, worms, mollusks, snails, crabs, and insects and their larvae.

REFERENCES: Cramp and Simmons 1983, Low and Mansell 1983, Palmer 1967.

Lesser Yellowlegs

Tringa flavipes



RANGE: Breeds from central Alaska and central Yukon to northern Manitoba, northern Ontario, and extreme west-central Quebec south to east-central British Columbia, across to southeastern Manitoba. Winters along the Pacific and Atlantic Coasts from southern California and South Carolina south to South America.

STATUS: Common.

HABITAT: Inhabits the Nearctic coniferous forest zone, from boreal and subarctic regions into the low Arctic; occurs mainly inland, and to some extent upland. Prefers grassy meadows and bogs, natural clearings, or burned areas in forest with scattered stumps and fallen logs, often far from open water. Outside the breeding season, inhabits shallow prairie sloughs in open country, muddy shores of lakes and marshy ponds, sewage beds, river margins, and inland and coastal marshes.

SPECIAL HABITAT REQUIREMENTS: Tundra ano muskeg.

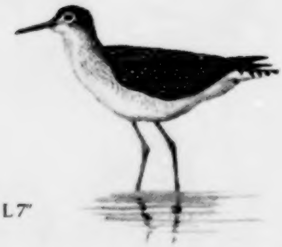
NEST: Nests in a depression on the ground, singly or in loose colonies. Locates nest on a dry sloping bank, ridge, or level plateau, in open high woodland with sparse, fairly low undergrowth, in swampy muskeg, or on undrained land surrounded by farmland.

FOOD: Forages by picking and snatching food from shallow water, especially in wet, shortgrass marshes, or in shallow ponds, wet cultivated fields, or on mudflats. Eats ants, bugs, flies, grasshoppers, insect larvae, small fishes, crustaceans, and worms.

PEFERENCES: Bent 1927, Cramp and Simmons 1983, Low and Mansell 1983, Palmer 1967.

Solitary Sandpiper

Tringa solitaria



L 7"

RANGE: Breeds from central and south-coastal Alaska and northern Yukon to northern and central Ontario, east through central Quebec to central and southern Labrador, and south to northwestern and central British Columbia across to southern Manitoba and northern Minnesota. Winters from the Gulf Coast, southeastern Georgia, and Florida south to South America.

STATUS: Common.

HABITAT: Inhabits inland muskeg with scattered mature trees or clumps of trees near freshwater lakes and ponds in the coniferous forest belt of boreal and subarctic regions. On its breeding range it perches freely on treetops, twigs, limbs, and stumps. Outside of the breeding season it occurs inland along shallow freshwater woodland streams, ponds, bogs, flooded marshes, stagnant pools, mudflats, and barnyard puddles.

SPECIAL HABITAT REQUIREMENTS: Muskegs.

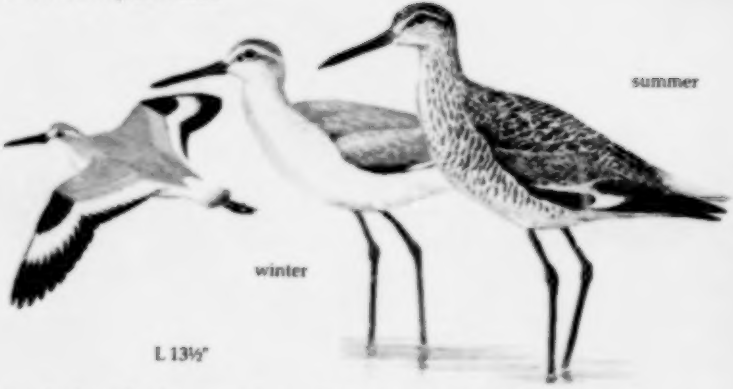
NEST: Nests up to 43 feet above ground in the old nests of American robins, waxwings, rusty blackbirds, and eastern kingbirds. Usually uses nests in coniferous trees that border muskeg or open bogs, or beside a lake.

FOOD: Forages while walking about on stranded vegetation, in soft mud, or in very shallow water. Eats aquatic insects, especially larvae, also worms, grubs, dragonfly nymphs, water-scavenger beetles, water boatmen, grasshoppers, caterpillars, spiders, small crustaceans, and small frogs.

REFERENCES: Bent 1929, Cramp and Simmons 1983, Palmer 1967, Pough 1951.

Willet

Catoptrophorus semipalmatus



RANGE: Breeds locally from eastern Oregon, central Alberta, and southwestern Manitoba, south to northeastern and east-central California, across to western and northern Nebraska and eastern South Dakota; locally along the Atlantic and Gulf Coasts from Prince Edward Island south to southern Florida and west to southern Texas. Occurs sporadically (nonbreeding birds) in summer as far south as northern South America. Winters along the Pacific and Atlantic Coasts from northern California and Virginia south to South America.

STATUS: Common.

HABITAT: Inhabits tidal and coastal marshes beaches, sandy islands with tall and thick grasses, open pastures, dry uplands near water, and along dunes in the East. Prefers inland prairies and plains, alkali flats, and grassy dikes, usually near water in the West. Associates freely with godwits, curlews, large plovers, and some shorebirds. Often perches on bushes, trees, fences, posts, rocks, and buildings.

SPECIAL HABITAT REQUIREMENTS: Moist plains and prairies in western North America, coastal marshes and nearby grassy areas in the East.

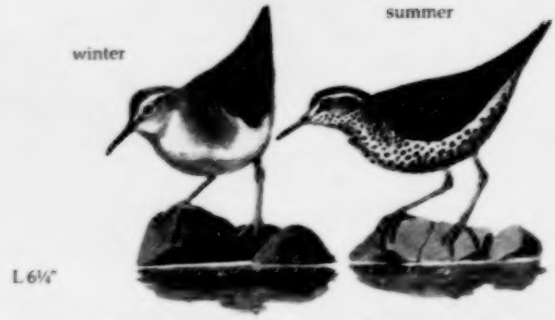
NEST: Nests semi-colonially in depressions on the ground or in a thick clump of vegetation, sometimes far from water in the West. Locates nest in open areas on a sandy beach to well hidden in low grasses.

FOOD: Forages by probing or by snatching food from the ground on tidal flats, in salt or brackish marshes, water-soaked pastures, along muddy creek banks, and on saline flats. Eats fiddler crabs, mollusks, marine worms, small fishes, adult insects, and some seeds, leaves, and roots of grasses.

REFERENCES: Bent 1927, Low and Mansell 1983, Palmer 1967, Stenzel et al. 1976, Terres 1980, Wilds in Farrand 1983a.

Spotted Sandpiper

Actitis macularia



RANGE: Breeds from central Alaska and central Yukon to Labrador and Newfoundland, south to southern Alaska, southern California, and central Arizona across to the northern portions of the Gulf States, North Carolina, Virginia, and eastern Maryland. Occasionally nonbreeding birds remain on the wintering ground in summer. Winters from southwestern British Columbia, southern Arizona, southern New Mexico, southern Texas, the southern portions of the Gulf States and coastal South Carolina south to South America.

STATUS: Common.

HABITAT: Inhabits the edges of ponds, lakes, rivers, and streams and open terrain with temporary pools, up to 14,000 feet elevation. It is sometimes found far from water in dry fields, pastures, and weedy shoulders of roads, occasionally on coastal beaches and dunes. Roosts on stumps, stranded logs, or rocks affording a clear view. In winter, frequents watercourses shaded by trees, and prefers shallow, muddy lagoons, creeks, canals, and higher mudflats.

SPECIAL HABITAT REQUIREMENTS: Margins of freshwater bodies.

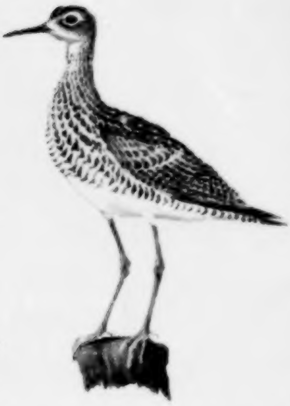
NEST: Builds solitary or loosely colonial nests on the ground, among thick, tall grasses, occasionally under a bush or log, and usually near water.

FOOD: Forages ashore or in shallow water, picking up insects and other small invertebrates. Eats fly larvae, pupae, and adults; mayflies; grasshoppers; crickets; mole crickets; worms; mollusks; crustaceans; and spiders.

REFERENCES: Cramp and Simmons 1983, DeGraff et al. 1980, Knowles 1942, Palmer 1967.

Upland Sandpiper

Bartramia longicauda



L 10"

RANGE: Breeds locally from north-central Alaska, northern Yukon, and northern Alberta to southern Quebec, central Maine, and southern New Brunswick south to northeastern Oregon, central Colorado, north-central Texas, central Missouri, West Virginia, and Maryland. Winters in South America.

STATUS: Uncommon; once abundant, numbers have been reduced due to past hunting pressure and agricultural practices.

HABITAT: Inhabits grassy open areas, ranging from sandy, sparsely vegetated flats to open, grassy bogs and muskeg. Most often found in rich pastureland, hayfields, and alfalfa fields. During the breeding season alights freely fenceposts, telephone poles, and other elevated sites. During migration, frequents alfalfa fields, pastures, prairie dog towns, and rarely shores and mudflats.

SPECIAL HABITAT REQUIREMENTS: Open grasslands.

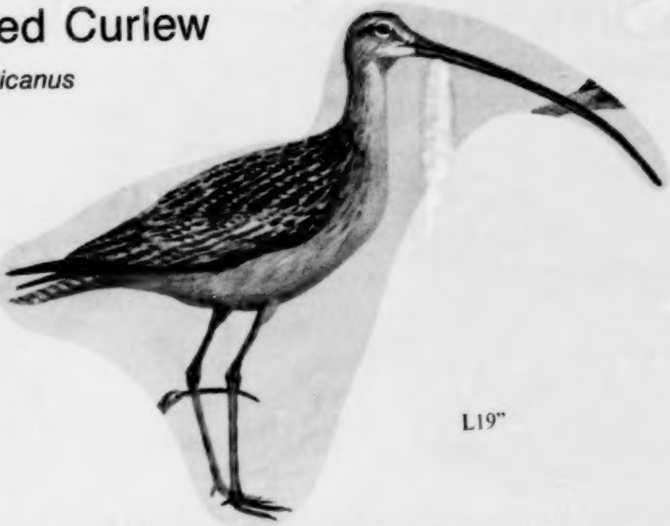
NEST: Nests in depressions on the ground among rank grasses, along sloughs in prairies, or in clearings of spruce muskeg, in loosely spaced colonies. Conceals nests are by covering them with nearby vegetation.

FOOD: Prefers to forage where the grasses are low and open enough to provide good visibility, and where grasshoppers and crickets are most abundant. Also eats weevils, ants, berries, waste grain, and seeds of grasses and weeds.

REFERENCES: Cramp and Simmons 1983, DeGraff et al. 1983, Palmer 1967, Tate and Tate 1982.

Long-billed Curlew

Numenius americanus



RANGE: Breeds from south-central British Columbia to southern Manitoba, south to northeastern California, central Utah, central New Mexico, and northern Texas, and east to southwestern Kansas. Winters from central California, southern Texas, southern Louisiana, and coastal South Carolina south to Mexico.

STATUS: Fairly common; once fairly abundant, lower population is due to past hunting pressure and loss of habitat due to grazing and agriculture.

HABITAT: Inhabits grasslands ranging from moist meadowland to very dry prairie. When at or near water, often loosely associates with godwits, willets, and yellowlegs. During the breeding season, commonly perches on bushes, low trees, dirt mounds, rocks, stumps, fenceposts, utility poles, or on other elevated sites. In other seasons, frequents wet habitats such as the shallow margins of inland and coastal waters, open areas of marshes, intertidal zones, or on sandbars.

SPECIAL HABITAT REQUIREMENTS: Prairies or grassy meadows.

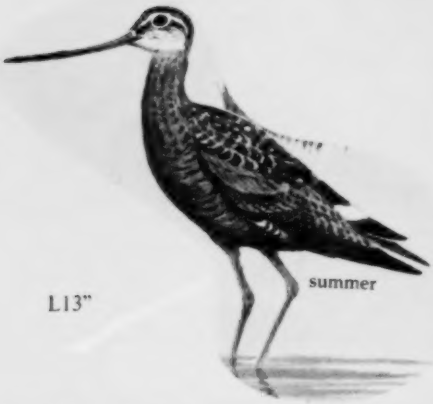
NEST: Nests in a slight hollow on the ground, usually in flat areas among short grasses such as cheatgrass and bluegrass. Locates nests in moist or arid areas far from water.

FOOD: Forages in areas that have a large variety of plants. Feeds by probing and pecking in wet sand or mud, under shallow water, or in uplands. Eats beetles, grasshoppers, caterpillars, other insect larvae, mud crabs, fiddler crabs, ghost shrimps, occasionally small fishes, and berries.

REFERENCES: Allen 1980, Palmer 1967, Stenzel et al. 1976, Tate and Tate 1982.

Hudsonian Godwit

Limosa haemastica



RANGE: Breeds locally in south-coastal and western Alaska, Mackenzie, northwestern British Columbia, and around Hudson Bay. Winters in South America.

STATUS: Locally common.

HABITAT: Inhabits wet bogs and marshes in open expanses along the northern edge of boreal forests and moist tundra, near tidal or fluvial shorelines. In other seasons, frequents fresh, brackish, and salt waters, on beaches, mudflats, marshes, flooded fields, and shallow ponds.

SPECIAL HABITAT REQUIREMENTS: Extensive sedge marshes and meadows near tidal flats.

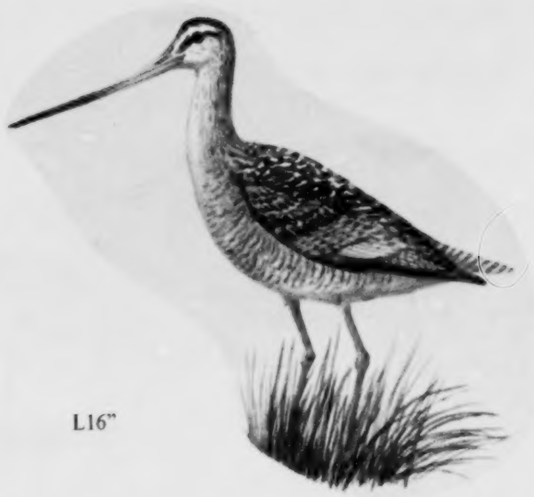
NEST: Nests in a depression on top of a hummock in a sedge marsh or meadow with water up to several inches deep. Frequently locates nest under a dwarf birch, occasionally on a sedge or grass tussock, under or among small willows, or near a fallen spruce tree, but usually where the vegetation is at least 5 to 6 inches high and thick enough to conceal the nest from the sides.

FOOD: Feeds on marine worms, horseflies, mosquitoes, and other insects, mollusks, and crustaceans. Prefers to feed in water about as deep as its bill is long.

REFERENCES: Bent 1927, Hagar 1966, Mackenzie 1977, Palmer 1967, Wilds in Farrand 1983a.

Marbled Godwit

Limosa fedoa



L16"

RANGE: Breeds from central Alberta to southern Manitoba and northern Ontario south to central Montana, northeastern South Dakota, and northwestern Minnesota. Some nonbreeding birds occur on the winter range during summer. Winters from central California, western Nevada, the Gulf Coast and coastal South Carolina south to South America.

STATUS: Common.

HABITAT: Inhabits grassy plains, broad flat wet meadows, and prairie sloughs, usually near lakes, rivers, or streams. During migration, frequents open coastal beaches and along lake shores; in winter, inhabits tidal flats in sheltered bays, next to inlets, and on open beaches. Gregarious and often in the company of willets and avocets.

SPECIAL HABITAT REQUIREMENTS: Grassy prairies near water.

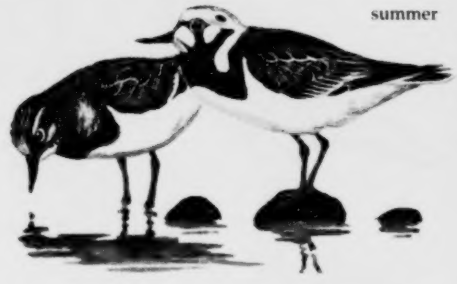
NEST: Builds single, or possibly semi-colonial, nest in slight hollow in short grasses, often in plain sight and usually near water.

FOOD: Forages by probing in shallow water and soft mud of sloughs and lake shores for aquatic insects and mollusks, and by capturing grasshoppers and other insects on meadows and low-lying prairies. Also eats snails, small crustaceans, insect larvae, worms, and leeches.

REFERENCES: Bent 1927, Palmer 1967, Wilds in Farrand 1983a.

Ruddy Turnstone

Arenaria interpres



L 7"

RANGE: Breeds from northern Alaska and the Canadian Arctic islands south to western Alaska, and Southampton, Coats, and Mansel Islands, probably also the northern portions of Mackenzie and Keewatin. Nonbreeding birds may be found through the winter range in summer. Winters along the Pacific and Atlantic Coasts from central California and New York south to South America.

STATUS: Common.

HABITAT: Inhabits flat, lichen-covered, mossy, or gravelly tundra near the seacoast in a variety of boreal habitats. Often perches on boulders, stakes, pilings, piers, and boats during breeding season. In other seasons, frequents rocks, reefs, and mussel beds of the intertidal zone, sandy beaches, and solid mudflats.

SPECIAL HABITAT REQUIREMENTS: Dry, dwarf-shrub tundra near the coast.

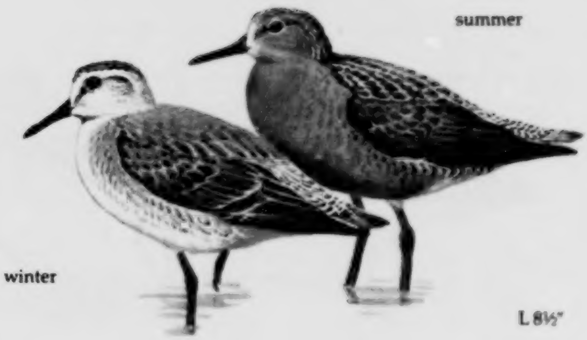
NEST: Nests in a depression in tundra in exposed or sheltered sites such as beside a rock or clump of vegetation. Uses a wet area near the nest site for brood rearing.

FOOD: Forages among seaweeds, rocks and shells, and roots in wet sand. Eats mollusks, crustaceans, worms, flies and their larvae picked from the carcasses of seals and whales, eggs of gulls and terns, grasshoppers, soft parts of barnacles, sand fleas, and fiddler crabs.

REFERENCES: Bent 1929, Palmer 1967, Terres 1980, Wilds in Farrand 1983a.

Red Knot

Calidris canutus



RANGE: Breeds in northwestern and northern Alaska and the Canadian Arctic islands east to Ellesmere Island and south to southern Victoria and Southampton Islands. Nonbreeding birds occasionally summer in the wintering range. Winters along the Pacific and Atlantic Coasts from southern California and Massachusetts south to South America.

STATUS: Locally common; once abundant, its numbers were reduced by hunting in the late 19th century.

HABITAT: Inhabits high inland plains, plateaus, and elevated slopes covered with glacial gravel and frost-riven rocks and shales, sometimes several miles from the coast. In migration and in winter, occurs mainly along the coast on exposed mudflats, sand spits, beaches, matted salt marshes, and river deltas.

SPECIAL HABITAT REQUIREMENTS: Barren or stony tundra and dry nesting sites.

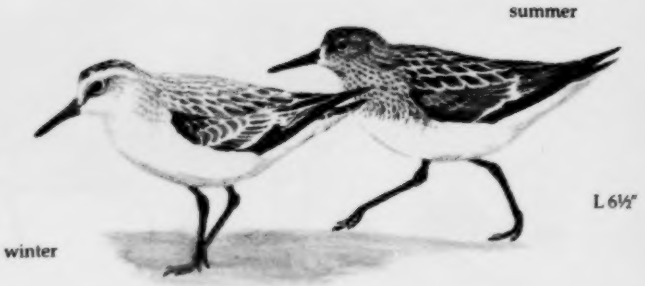
NEST: Nests in a shallow depression among dryads, lichens, and other tundra vegetation, rubble, and gravel, and usually on high, dry hills and plateaus.

FOOD: Flies to fresh waters or marine shores from nesting areas up to several miles away to feed during the breeding season. Mainly feeds on the surface, but also probes for food in mud and sand. Eats insects, mollusks, crustaceans, king crab eggs, and some seeds, buds and shoots of grasses, sedges, pondweeds, and bulrushes.

REFERENCES: Bent 1927, Davis in Farrand 1983a, Palmer 1967, Sperry 1940, Terres 1980.

Sanderling

Calidris alba



RANGE: Breeds in northern Alaska, and from Prince Patrick Island to northern Ellesmere Island, south to northern Mackenzie, northern Keewatin, and Southampton, and northern Baffin Islands. Nonbreeding birds occur in summer in the winter range. Winters in the Aleutian Islands (locally), and from southern Alaska, the Gulf Coast, and Massachusetts south along the Atlantic and Pacific Coasts to South America.

STATUS: Common.

HABITAT: Inhabits high Arctic tundra, particularly dry clay-mixed stony plains sparsely covered with willows, dryad, and saxifrage, on islands, peninsulas, and along the coast. Outside the breeding season, frequents sandy coastal beaches and tidal flats. Inland migrants inhabit sandbars along rivers and on lake beaches.

SPECIAL HABITAT REQUIREMENTS: Dry tundra.

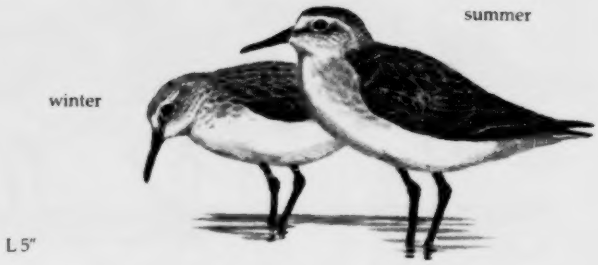
NEST: Nests in a slight hollow or depression on the ground on stony, well-drained ridge tops, gentle slopes, or on level alluvial plains. Usually locates nest at the edge of, or in, clumps of low plants and within several hundred yards of a marshy pond, but occasionally nests up to a mile from wet tundra.

FOOD: Probes in wet sand, picks up food washed on shore by the tide, and snatches up insects. In winter and on migration, feeds on sand fleas, shrimp, and other small crustaceans, small mollusks, and marine worms. On the breeding grounds, feeds on flies and their larvae, and other insects.

REFERENCES: Bent 1927, Cramp and Simmons 1983, Davis in Farrand 1983a, Parmelee 1970, Palmer 1967.

Semipalmated Sandpiper

Calidris pusilla



RANGE: Breeds from the Arctic Coast of western and northern Alaska north to Victoria and central Baffin Islands, east to northern Labrador, and south to western Alaska and east-central Mackenzie across to northern Ontario, northern Quebec, and coastal Labrador. Nonbreeding birds may summer in coastal North America south to the Gulf Coast and Panama. Winters from southern Florida south to South America.

STATUS: Abundant.

HABITAT: Inhabits subarctic and low to high Arctic tundra from coasts, dunes, borders of tidal inlets and deltas to damp grassy flats in interior and wet riverside tundra. Often occurs near lakes or pools, shifting from first areas uncovered by melting snow and surface ice to others becoming clear shortly afterwards, including upland tundra. In other seasons, frequents mudflats, sandy beaches, and wet meadows, favoring the vicinity of water on tidal flats, lagoons, and ponds.

SPECIAL HABITAT REQUIREMENTS: Grassy or hummocky tundra.

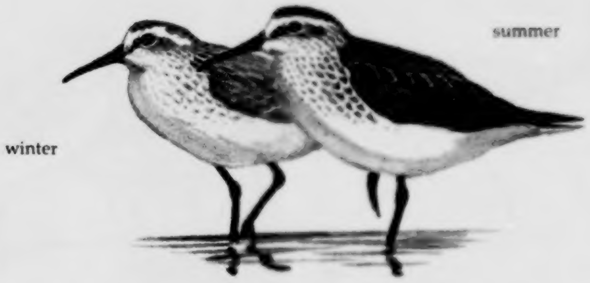
NEST: Nests in a slight depression on the ground, amid short herbage, sometimes in sand on grassy dunes or in low wet tundra near small lakes.

FOOD: Forages by snatching food from surface and probing in soft mud on mudflats or in wet sand exposed by ebbing tide. Eats beetles, flies, fly larvae, mosquitoes, small mollusks, marine worms, small crustaceans, and bits of seaweeds.

REFERENCES: Cramp and Simmons 1983, Davis in Farrand 1983a, Palmer 1967, Terres 1980, Townsend in Bent 1927.

Western Sandpiper

Calidris mauri



L 5¼″

RANGE: Breeds on islands in the Bering Sea and along the coasts of western and northern Alaska. Winters from California and North Carolina south along both the Pacific and Atlantic Coasts to South America.

STATUS: Common.

HABITAT: Inhabits a complex mosaic of wet low-lying grass and sedge marshes dotted with small pools and lakes, and relatively well-drained heath-covered tundra such as hummocks, ridges, and better drained slopes of hills that are vegetated with mosses, lichens, dwarf shrub heath, dwarf birch, willows, and some herbs, grasses, and sedges. Outside of the breeding season, frequents mudflats, beaches, shores of lakes and ponds, and flooded fields.

SPECIAL HABITAT REQUIREMENTS: Patches of dwarf shrub-heath tundra (at least 1/2 acre) interspersed among wet marshes for nesting.

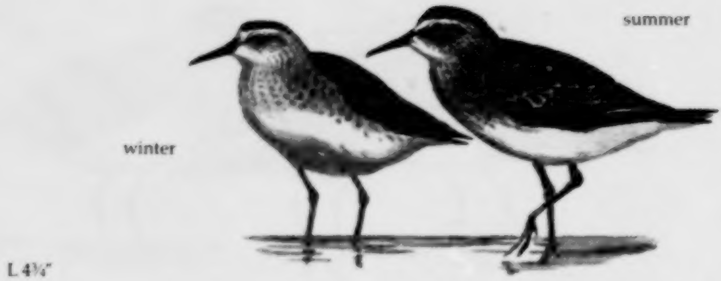
NEST: Nests on the ground in loose colonies or singly in nests that are usually well camouflaged under low vegetation. Locates nests in dry or moist areas, from the upper slopes of hills down to the marsh edge, or within a marsh on a patch of heath tundra. After fledging, moves into the marshes, frequenting margins of lakes and rivers.

FOOD: Feeds by snatching or probing for food close to or in water; eats small invertebrates, including insect larvae and aquatic beetles, bugs, marine worms, and small snails.

REFERENCES: Bent 1927, Cramp and Simmons 1983, Holmes 1971, Palmer 1967.

Least Sandpiper

Calidris minutilla



RANGE: Breeds from western Alaska and northern Yukon to southern Keewatin, northern Quebec, and northern Labrador south to the Alaska Peninsula, southeastern Alaska, and northwestern British Columbia across to northern Ontario, eastern Quebec, Nova Scotia, and Newfoundland; isolated breeding in Massachusetts. Nonbreeding birds summer in the wintering range, primarily in North America south to California and the Gulf Coast. Winters from coastal Oregon and southern Nevada to central Texas, the Gulf States, and North Carolina south to South America.

STATUS: Very common.

HABITAT: Inhabits open grass or sedge bogs and marshes in the northern spruce forest just south of treeless tundra, or among complexes of pools and water channels with scattered knolls and hummocks. Outside of the breeding season, prefers wet, muddy, or grassy areas such as muddy shores of grass fringed marshes or estuaries, grassy wet meadows, and grass-bordered mudflats of lakes, ponds, or rivers; found less frequently on sandy beaches.

SPECIAL HABITAT REQUIREMENTS: Wetlands of subarctic boreal forests and tundra.

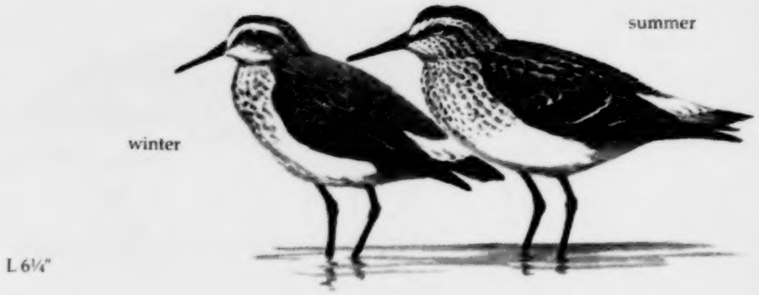
NEST: Nests in a depression in a mossy hummock, a plant tuft, in a clump of grass, or sometimes on the ground, usually in marshy cover but sometimes in drier upland near water.

FOOD: Prefers to feed in marshes, where it snatches insects or probes for food in soft mud or in shallow water. Eats midges and other dipterans, ground beetles, grasshoppers, insect larvae, small crustaceans, small mollusks, and worms.

REFERENCES: Cramp and Simmons 1983, Cottam and Hanson 1938, Low and Mansell 1983, Palmer 1967, Pough 1951, Terres 1980.

White-rumped Sandpiper

Calidris fuscicollis



RANGE: Breeds from northern Alaska to northern Bylot Island, south to the mainland coasts of Mackenzie and Keewatin, northwestern Hudson Bay, Southampton Island, and southern Baffin Island. Migrates along the Atlantic Coast and winters in South America.

STATUS: Uncommon.

HABITAT: Inhabits both lowland and upland tundra, frequently around bog pools, on dry ridges, or among grassy tussocks near rivers or lakes. Usually closely associated with moist, open terrain, but tolerates occasional freezing and snow cover and a wide range of temperatures. In migration, prefers shallow grassy pools, wet meadows, and marshes but also occurs on sandbars, mudflats, and beaches.

SPECIAL HABITAT REQUIREMENTS: Mossy or grassy tundra.

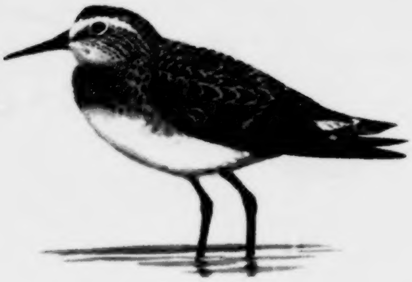
NEST: Nests in mossy depressions in clumps of grasses and sedges in the uplands, or in mossy hummocks on well-vegetated tundra that is persistently wet, often near marshy ponds and lake shores. Conceals nest, usually among grasslike plants, including narrow-leaved cotton-grass, grass rush, water sedges, and mosses.

FOOD: Forages by snatching prey and by probing deeply in soft mud. Eats cranefly larvae, beetles, grasshoppers, clover-root curculio, and other insects, tiny mollusks, marine worms, and a few seeds.

REFERENCES: Bent 1927, Cramp and Simons 1983, Drury 1961, Palmer 1967, Parmelee et al. 1968, Terres 1980.

Baird's Sandpiper

Calidris bairdii



L 6"

RANGE: Breeds from western and northern Alaska to Ellesmere Island, south to central Alaska, northern Mackenzie, Keewatin, Southampton Island and south-central Baffin Islands. Winters in South America.

STATUS: Uncommon.

HABITAT: Inhabits dry coastal and alpine tundra, particularly barren, exposed ridges, terrace banks, and raised beaches that are sparsely covered with low matted vegetation. Prefers sheltered places and frequents muddy, sandy, and grassy areas near water, including irrigated fields, shores of lakes and ponds, alpine tundra, and marshes. During migration, prefers inland to coastal habitats.

SPECIAL HABITAT REQUIREMENTS: Dry tundra.

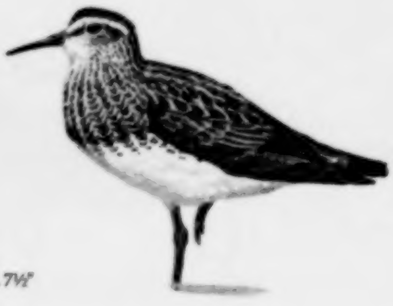
NEST: Nests are in shallow depressions on the ground, usually in wind-blown and lichen-strewn areas with large patches of bare soil. Sometimes nests in grassy areas in a tuft of vegetation or among lichen-covered rocks.

FOOD: Forages by snatching food, primarily in dry areas or along wet edges of lakes and ponds. Eats small crustaceans, spiders, beetles and their larvae, gnats, craneflies, and other insects, moss, leaves and stems, and other plant parts.

REFERENCES: Cramp and Simmons 1983, Davis in Farrand 1983a, Drury 1961, Palmer 1967, Terres 1980.

Pectoral Sandpiper

Calidris melanotos



L 7½"

RANGE: Breeds from western and northern Alaska to Bathurst and Devon Islands, south to western Alaska, central Mackenzie, and southeastern Keewatin Districts, and the south coast of Hudson Bay. Winters in South America, casually north to the Gulf Coast and Florida.

STATUS: Common.

HABITAT: Inhabits dry and moss-lichen tundra, tundra grassland, tussocky tundra with sedge, and peat tundra with hummocks up to 10 to 15 feet. In Alaska, found along the coast and in the foothills, frequenting a variety of tundra habitats on flat terrain that are poorly drained, usually wet, and characterized by low grasses and sedges, dwarf shrubs, and cottongrass tussocks. Outside of the breeding season, prefers grassy terrain bordering moving or still waters; only rarely found on open mudflats.

SPECIAL HABITAT REQUIREMENTS: Dry nesting sites on arctic tundra.

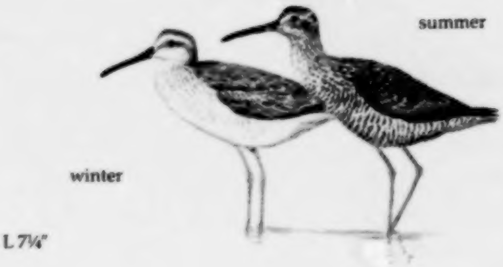
NEST: Nests in a depression on dry ground in areas with a continuous cover of grasses and sedges. Hides nest well, usually under a tree or bush.

FOOD: Forages mainly in dry, grassy meadows on insects, especially flies and their larvae. Also eats beetles, crickets, grasshoppers, amphipods, other tiny crustaceans, mites, spiders, algae, and a few seeds of grasses, lupines, and violets.

REFERENCES: Bent 1927, Cramp and Simons 1983, Low and Mansell 1983, Palmer 1967, Pitelka 1959.

Stilt Sandpiper

Calidris himantopus



RANGE: Breeds from northern Alaska, northern Yukon, northern Mackenzie, and southern Victoria Island southeast to southeastern Keewatin, northeastern Manitoba, and northern Ontario, probably also south locally in Canada to borders of the taiga. Winters primarily in South America, but casually northward to southeastern California, the Gulf Coast, and Florida.

STATUS: Uncommon.

HABITAT: Inhabits sedge meadows interrupted by old beach ridges, eskers, or other elevated areas dominated by dwarf birch, heaths, willows, crowberries, and dryads. Sometimes occurs in wet tundra areas with fairly high willows, or on much drier slopes with moderate vegetative cover, avoiding truly barren ridgetops.

SPECIAL HABITAT REQUIREMENTS: Well-drained sedge meadows in arctic tundra with elevated sites for nesting.

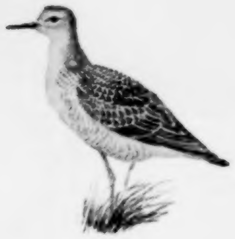
NEST: Nests in a depression on the ground in relatively open areas of dry tundra, usually atop a hummock or on a low, well-drained gravel ridge; occasionally nests next to a shrub. Locates nest sites independent of standing water. May reuse old nests. Moves chicks from drying sedge meadows to wet areas.

FOOD: Forages on dry ridgetops, around clumps of sedges, at the edges of tiny depressions filled with water, in marshes at tundra pond margins, by probing in soft mud on mudflats or while wading in water. Feeds opportunistically, on a relatively small spectrum of food including larval and adult beetles, larvae of other insects, flies and other flying insects, water bugs, small snails, and small seeds.

REFERENCES: Cramp and Simmons 1983, Jehl 1973, Palmer 1967, Terres 1980.

Buff-breasted Sandpiper

Tryngites subruficollis



L 6½"

RANGE: Breeds from northern Alaska to Banks, Melville, Bathurst, and Devon islands, south to northwestern Mackenzie, and Jenny Lind, and King William Islands. Winters in South America.

STATUS: Uncommon; once abundant, its numbers were reduced by several decades of hunting pressure.

HABITAT: Prefers raised and grassy terrain, sometimes by streams, but avoids marshy areas. Predominately a ground bird, it only occasionally occurs on beaches and along shores in migration, favoring short-grass prairies, burned-over grasslands, cotton fields, recently plowed fields, sun-baked stubble, and barren, recently inundated lands.

SPECIAL HABITAT REQUIREMENTS: Dry, grassy tundra.

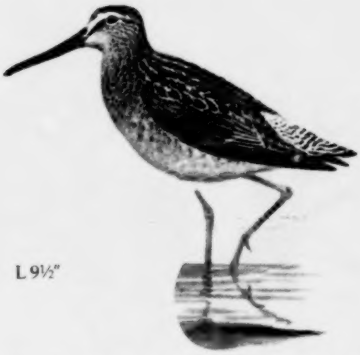
NEST: Nests in a shallow cavity in dry, mossy or grassy tundra, sometimes near water or on high and dry banks of black tundra.

FOOD: Forages primarily on insects gleaned from the surface. Eats adult and larval beetles, larvae and pupae of flies, some spiders, and seeds of smartweeds, pondweeds, and spikerushes.

REFERENCES: Bent 1927, Cramp and Simmons 1983, Palmer 1967.

Short-billed Dowitcher

Limnodromus griseus



RANGE: Breeds from southern Yukon to northeastern Mackenzie, south to east-central British Columbia, amd across to central Saskatchewan; from the interior of the Ungava Peninsula south to northern Ontario, and in coastal regions of southern Alaska. Nonbreeding birds often occur south to wintering grounds in summer. Winters from central California, southern Arizona, the Gulf Coast, and coastal South Carolina south to South America.

STATUS: Common.

HABITAT: Primarily inhabits coniferous forest and muskeg with thin crusts of moss and long grass floating on a liquid morass, but also inhabits swampy coastal tundra. Low scrub of willow, alder, and birch are often present, with a few taller larch and spruce, sometimes flanked by dry ridges of dense coniferous forest or burned-over forests. After breeding, moves to open prairie lakes and sloughs. During migration and winter, occurs on mud and sand flats in sheltered bays and estuaries, on the borders of shallow pools in salt marshes, on sandy beaches, and in flooded fields.

SPECIAL HABITAT REQUIREMENTS: Swampy coastal tundra or muskeg.

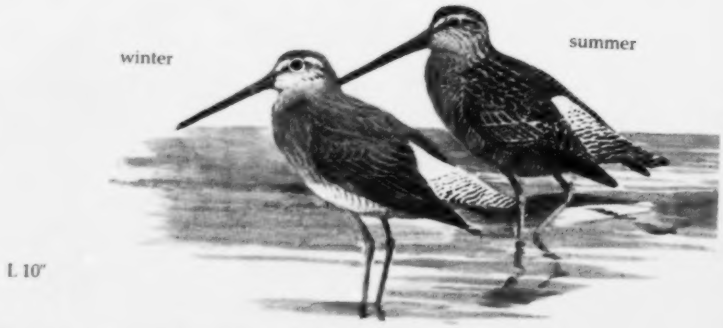
NEST: Nests in a hollow in mosses, in a clump of grasses, or on dry ground in wet areas. Sometimes nests in a small clearing in coniferous forest near muskeg, but not under trees or in broken terrain.

FOOD: Feeds by probing deeply in wet sand, mud, in shallow water, or in seaweeds. Eats flies, beetles, dragonfly nymphs, and other insects, as well as marine worms, snails, crabs, shrimps, and seeds of marsh and aquatic plants.

REFERENCES: Cramp and Simmons 1983, Palmer 1967, Sperry 1940.

Long-billed Dowitcher

Limnodromus scolopaceus



RANGE: Breeds in coastal western and northern Alaska, northern Yukon, and northwestern Mackenzie. Winters from central California, southern Arizona, southern New Mexico, central Texas, the Gulf Coast, and southern Florida south to Panama.

STATUS: Common.

HABITAT: Found on arctic continental coastal belts and marginally within the subarctic just beyond treeline. Inhabits grassy and sedgy tundra, with or without scattered low woody vegetation and usually near shallow fresh water. In migration and winter, prefers grassy margins of shallow, muddy freshwater pools and, occasionally saltwater habitats. Associates freely with other shorebirds, including the larger plovers.

SPECIAL HABITAT REQUIREMENTS: Grassy tundra and wet meadows.

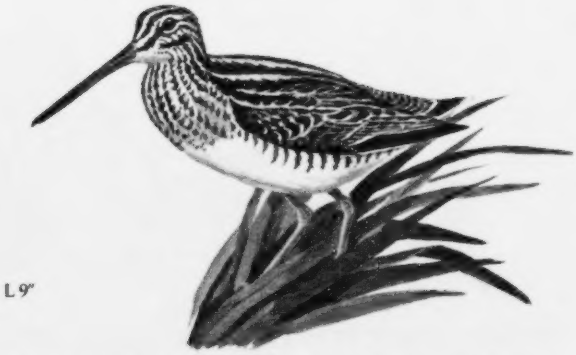
NEST: Nests in a shallow depression in a tuft of grass or in moss, on dry or moist ground, usually near freshwater.

FOOD: Feeds in open unvegetated tracts of mud, as well as patches surrounded by tundra. Eats flies, beetles, small crustaceans and mollusks, marine worms, spiders, and seeds of aquatic plants.

REFERENCES: Bent 1927, Cramp and Simmons 1983, Palmer 1967, Sperry 1940.

Common Snipe

Gallinago gallinago



RANGE: Breeds from northern Alaska and northern Yukon to southern Keewatin, northern Quebec, and central Labrador, south to central California, east-central Arizona, and northern Colorado across to northern West Virginia, New England, and the Maritime Provinces. Winters from southeastern Alaska, southern British Columbia, the central United States, and Virginia south to South America.

STATUS: Common.

HABITAT: Inhabits wetlands, especially fens, bogs, swamps, and marshes, primarily in peatlands scattered within the spruce, fir, and larch boreal forest. Occupies areas with fairly dense, low woody growth such as willows and alders, and with a ground cover of sphagnum, sedges, and grasses, preferably near open pastures or other clearings. Also inhabits areas of decomposed wet plant litter along ponds, meandering rivers and brooks, and other marshy sites. In winter it occupies wet, marshy habitats, wet meadows, flooded fields, and stream edges.

SPECIAL HABITAT REQUIREMENTS: Bogs, fens, and swamps with moist organic soils near open areas free of obstacles or high vegetation that might interfere with display activities.

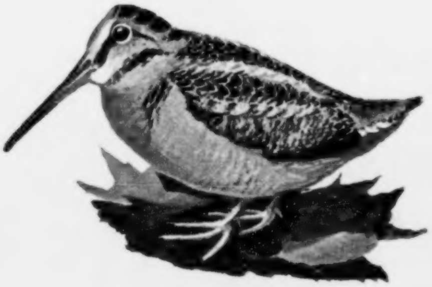
NEST: Nests in a scrape on fairly dry ground or in a tussock of grass or sedge, usually in wet habitats but occasionally at the edge of wetlands. Conceals nest, sometimes covering it with an arch of dry vegetation.

FOOD: Forages by probing in soft mud and shallow water, and by gleaning grasses and the surfaces of marsh plants. Diet consists primarily of animal foods including insects, crayfish, crabs, earthworms, and mollusks. Also eats some seeds.

REFERENCES: DeGraff et al. 1980, Fogarty and Arnold 1977, Palmer 1967, Sperry 1940, Tuck 1972.

American Woodcock

Scolopax minor



L 8¼"

RANGE: Breeds from southern Manitoba, northern Minnesota and south-central and southern Ontario to northern New Brunswick and Newfoundland, south throughout eastern North America to the Gulf States, and southern Florida, and west. Winters from eastern Oklahoma, southern Missouri, Tennessee, and Virginia south to east-central Texas, the Gulf Coast, and southern Florida.

STATUS: Common; may be declining in parts of the East.

HABITAT: Inhabits moist woodlands in early stages of succession especially, those with birch, aspen, red maple, alder, or willows under 25 feet tall and having an understory of conifers. Also found in alder swales with surrounding pockets of second-growth mixed hardwoods, old agricultural fields, burned or recently logged areas, areas too wet to support forest growth, hardwoods adjacent to streams and ponds, and brushy edges of woods. Uses open fields, cultivated land, pastures, and clearings at least 1/4 acre in size on relatively flat ground, and with a slight amount of ground cover for singing grounds.

SPECIAL HABITAT REQUIREMENTS: Dense brushy swales with nearby fields or small forest openings for courtship activities and roost sites, and fertile, generally poorly drained soils containing an abundance of earthworms for feeding.

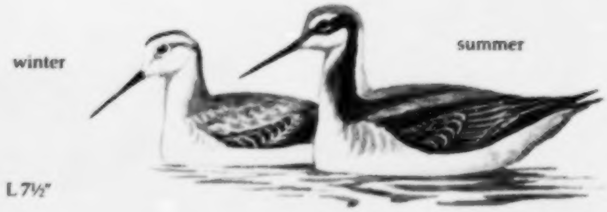
NEST: Nests in a slight depression on dry ground, usually within a few yards of a brushy edge. Also nests on a hummock in wet areas, in open fields, or in young to middle-aged hardwoods of low to medium density.

FOOD: Feeds in open pastures, cultivated fields, and along stream banks, probing in soft mud and leaf litter for earthworms, which make up 50 to 90 percent of the diet. Also eats insect larvae and adults, crustaceans, spiders, seeds, and berries.

REFERENCES: DeGraff et al. 1980, Gregg and Hale 1977, Mendall and Aldous 1943, Owen 1977, Palmer 1967, Sepik et al. 1981, Sperry 1940.

Wilson's Phalarope

Phalaropus tricolor



RANGE: Breeds from southern Yukon and northern Alberta to southern Michigan and southwestern Quebec south to south-central California, east-central Arizona, west-central New Mexico, northern Texas, eastern South Dakota, northern Illinois, northern Indiana, and northern Ohio; isolated breeding in Massachusetts. Winters primarily in South America, casually as far north as southern California and southern Texas.

STATUS: Uncommon.

HABITAT: Once inhabited natural prairies but now found mainly on highly disturbed mixed-grass prairies dotted with small glacial potholes. Also found in taiga broken by moist, grassy muskeg and many small lakes and pools, and in farming country of aspen-grove parklands. Inhabits rolling uplands as high as 6,900 feet in elevation. Outside the breeding season, mainly found on inland wetlands but sometimes on saline or alkaline depressions.

SPECIAL HABITAT REQUIREMENTS: Shallow water bordered by low grasses or sedges.

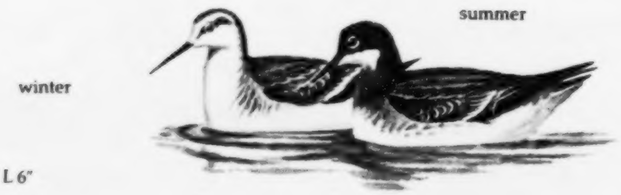
NEST: Nests semi-colonially in a scrapes on the ground around damp meadows with marsh grasses and sedges or rushes. Also nests by shallow sloughs, morasses fringed with short grasses or sedges, lake shores, and in hay meadows or pastures, often 50 to 100 yards from water.

FOOD: Forages on muddy shores and in shallow water; stirs up food by whirling its body around in water. Consumes larvae of mosquitoes and craneflies; predaceous diving beetles, aquatic bugs, brine shrimp, amphipods, eggs of water fleas; and seeds of aquatic plants.

REFERENCES: Bent 1927, Cramp and Simmons 1983, Hohn 1967, Low and Mansell 1983, Palmer 1967.

Red-necked Phalarope

Phalaropus lobatus



RANGE: Breeds from northern Alaska and southern Victoria Island to central Keewatin and southern Baffin Island, south to northwestern British Columbia and northern Alberta across to northern Quebec, and locally along coast of Labrador. Winters mainly at sea in the Southern Hemisphere, largely in tropical and subtropical oceans.

STATUS: Uncommon.

HABITAT: Inhabits the wetter portions of flat alluvial plains, sedge-grass marshlands, clearings in alder and willow scrub, and heath covered slopes above alder and willow scrub. In winter, occurs near upwellings or where other local conditions produce a high biomass of accessible food organisms.

SPECIAL HABITAT REQUIREMENTS: Wet grassy or sedgy terrain interspersed with pools, boreal clearings, or tundra.

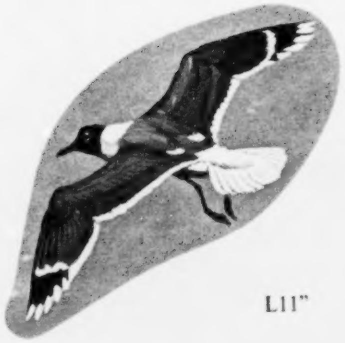
NEST: Nests in a small hollow in moss or among sedges, usually atop a small hummock surrounded by water or near a marshy pond or small stream.

FOOD: Forages while swimming, wading, and walking, chiefly on invertebrates. During the breeding season and in migration, eats predominately small insects, especially adult flies and larvae. Also consumes mollusks, crustaceans, spiders, mites, worms, and rarely small fishes and tadpoles, as well as some seeds and algae.

REFERENCES: Bent 1927, Clapp et al. 1983, Cramp and Simmons 1983, Hohn 1968, Palmer 1967.

Franklin's Gull

Larus pipixcan



RANGE: Breeds from eastern Alberta and central Saskatchewan to western Minnesota, south locally to east-central Oregon, northwestern Wyoming, and northwestern Iowa. Winters primarily in South America, rarely in southern coastal California, and casually along the Gulf Coast of Texas and Louisiana.

STATUS: Common.

HABITAT: Breeds exclusively in shallow freshwater marshes and sloughs in the temperate prairie belt. Favors shallow wetlands up to 6 inches deep with bulrushes, cattails, whitetop, and common reeds, preferably near cultivated lands. In migration and in winter, inhabits sandy beaches, sandbars, fields, and pastures.

SPECIAL HABITAT REQUIREMENTS: Marshes and sloughs with sparse emergent vegetation no denser than one plant less than 3 feet tall per square foot.

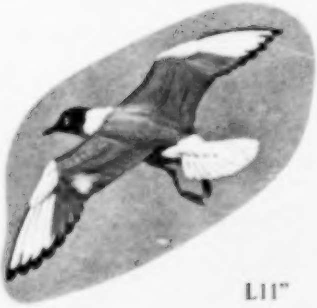
NEST: Nests in colonies from a few hundred up to 50,000 pairs. Builds nests on masses of marsh vegetation, often floating on water and anchored to surrounding vegetation. Nests usually near open water.

FOOD: During the breeding season, forages in marshes and fields up to 30 miles from the nesting site. Feeds on a wide variety of foods, especially insects, also taking some amphibians; seeds of wheat, oats, and barley; a few small mammals; and in winter, fish and crustaceans.

REFERENCES: Clapp et al. 1983, Cramp and Simmons 1983, Guay 1968, Low and Mansell 1983, McAtee and Beal 1912.

Bonaparte's Gull

Larus philadelphia



RANGE: Breeds from western and central Alaska and central Yukon to northern Manitoba, south to southern British Columbia, central Saskatchewan, southern Manitoba, and southern James Bay. Occurs in summer (nonbreeding birds) south to coastal areas in California and New England, and in interior to the Great Lakes. Winters from Washington south along the Pacific Coast into Mexico and from the Great Lakes south through the Ohio and Mississippi Valleys to the Gulf Coast.

STATUS: Common.

HABITAT: Inhabits coastal and interior lowlands, primarily black fly-infested muskeg swamps in taiga up to treeline. Outside the breeding season it occurs on freshwater lakes, rivers, and sloughs, wet meadows, flooded fields, estuaries, shallow coastal waters, bays, and inlets.

SPECIAL HABITAT REQUIREMENTS: Ponds or lakes in swampy muskeg flanked by short to medium conifers.

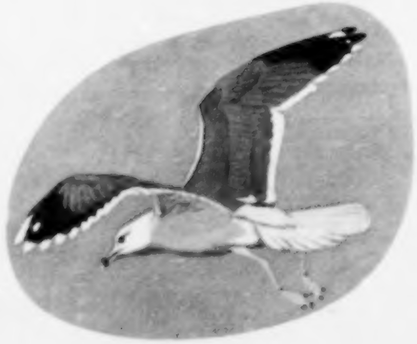
NEST: Nests in dispersed colonies or noncolonially, from 4 to 20 feet above ground in branches or stumps of spruce, fir, and tamarack, and near water. May also nest in reeds, on mudflats of temporary potholes, and in clumps of bulrushes.

FOOD: Forages in a variety of habitats associated with water, such as marshy ponds, freshwater marshes, rivers, lakes, estuaries, salt marshes, beaches, bays, and open ocean. Eats small fishes, insects, spiders, snails, crustaceans, and marine worms.

REFERENCES: Bent 1921, Clapp et al. 1983, Cramp and Simmons 1983.

Ring-billed Gull

Larus delawarensis



L16"

RANGE: Breeds in the West from southern interior British Columbia and northeastern Alberta to north-central Manitoba south to northeastern California, south-central Colorado and northeastern South Dakota; in the East from north-central Ontario to southern Labrador south to eastern Wisconsin and northern Illinois across to central New Hampshire and New Brunswick. Winters along the Pacific Coast from southern British Columbia south to Mexico; in the interior from the Great Lakes to Mexico and the Gulf Coast; and along the Atlantic Coast from the Gulf of St. Lawrence to the Greater Antilles.

STATUS: Common.

HABITAT: From boreal regions to temperate prairies, inhabits small to moderately sized rocky islands and occasionally peninsulas in large freshwater lakes, rivers, or ponds (a few colonies are on oceanic islands or coasts). Usually avoids densely settled areas. Outside the breeding season, frequents harbors, refuse dumps, sewage outlets, reservoirs, lakes, ponds, streams, coastal bays, estuaries, beaches, and mudflats. Roosts on exposed sandbars and islands.

SPECIAL HABITAT REQUIREMENTS: Islands and peninsulas covered with low vegetation 6 to 54 inches high.

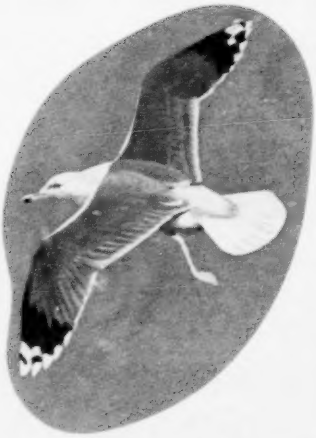
NEST: Frequently nests in mixed colonies with other Laridae, including herring and California gulls. Usually nests on the ground in flat, elevated, sparsely vegetated areas, but sometimes in low trees.

FOOD: Forages in plowed fields, pastures, tidal flats in salt marshes, along the shore, along beaches, and in shallow waters. During the breeding season, feeds extensively on insects, grains, and small fishes. Also eats small rodents, earthworms, and refuse.

REFERENCES: Clapp et al. 1983, Cramp and Simmons 1983, Jarvis and Southern 1976, Vermeer 1970.

California Gull

Larus californicus



L17"

RANGE: Breeds from southern Mackenzie south to northern Utah and north-central Colorado, and west to southern interior British Columbia and northeastern California. Winters from southern Washington and eastern Idaho south, mostly along the Pacific Coast to Mexico.

STATUS: Common.

HABITAT: Inhabits barren islands on fresh, brackish, or alkaline lakes, shores of lakes or ponds, and marshes. Favors sites with low, sparse vegetation. Outside the breeding season it occurs on seacoasts, bays, estuaries, mudflats, irrigated fields, and other agricultural lands.

SPECIAL HABITAT REQUIREMENTS: Open sandy or gravelly lakeshores or islands.

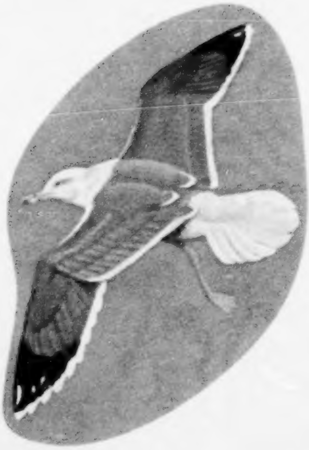
NEST: A colonial nester, often nesting in mixed colonies with the ring-billed gull. Avoids dense herbaceous cover, and constructs its nest in a scrape on the ground in elevated, boulder-strewn areas.

FOOD: Forages opportunistically on shortgrass plains and cultivated lands for a wide variety of foods, including insects, carrion and garbage, earthworms, young birds, bird eggs, and rodents.

REFERENCES: Greenhalgh 1952, Johnsgard 1979, Vermeer 1970.

Herring Gull

Larus argentatus



L20"

RANGE: Breeds from northern Alaska and northern Yukon to central Keewatin, western Baffin Island, and northern Labrador south to south-central British Columbia, central Alberta, northern Minnesota, northeastern Illinois, northern Ohio, northern New York, and along the Atlantic Coast to northeastern South Carolina. Winters from southern Alaska, the Great Lakes region, and Newfoundland south, mostly at sea and along coasts, large rivers and lakes, to Panama.

STATUS: Abundant.

HABITAT: Uses a wide variety of habitats, including sandy, rocky, or wooded islands, stabilized sand dunes, margins of tundra lakes, *Spartina* marshes, cliffs, grass meadows, and buildings. In winter, occurs primarily along the shore of the ocean or other bodies of water, concentrating on beaches and in areas where food is likely to be abundant.

SPECIAL HABITAT REQUIREMENTS: Nesting sites must be free of terrestrial predators and within 25 miles of a dependable source of food.

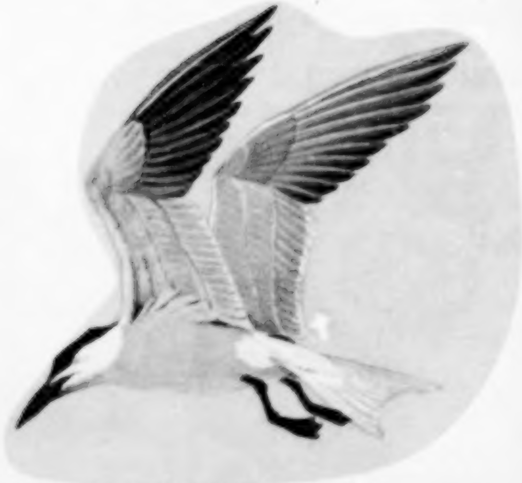
NEST: Usually nests in exposed sites on the ground in small to large colonies, but occasionally in trees. Prefers to nest in low sites; depending on habitat may nest at the base of boulders, stumps, or bushes on grassy slopes, near large, tall clumps of vegetation, on drift adjacent to salt marshes, or on rock or grassy substrates.

FOOD: Feeds opportunistically in garbage dumps, around seafood-processing operations, in pastures and cultivated fields, on lawns, tundra, and beaches, and at sea. Consumes largely animal matter, including small mammals, birds and bird eggs, amphibians, fishes, shellfishes, and a great variety of invertebrates, plus berries and some fruit, as well as carrion and, at times, garbage.

REFERENCES: Burger and Shisler 1978, Clapp et al. 1983, Cramp and Simmons 1983, Forbush and May 1955.

Caspian Tern

Sterna caspia



L20"

RANGE: Breeds locally in the West from coastal and eastern Washington, eastern Oregon, northern Utah and northwestern Wyoming south to southern California and western Nevada; in the interior from southern Mackenzie to southern James Bay south to North Dakota, northeastern Illinois, and southern Ontario; at scattered localities along the Atlantic Coast from Newfoundland to South Carolina; and along the Gulf Coast from Texas east to Florida. Nonbreeding birds often summer in the James Bay and Great Lakes region, and along both coasts of the United States. Winters primarily in coastal areas from California and North Carolina south to Mexico.

STATUS: Common.

HABITAT: Usually found near the coastline on sandy, stony, or shell beaches, barrier or spoil islands, islands with sand-gravel substrate with little or no vegetation, or on a shell berm in a salt marsh. Tends to occupy less-developed and less-polluted segments of the coast, but is also found inland along shorelines of large lakes. Wintering terns generally are found along beaches, and on isolated spits, often roosting with other larids. In migration, occurs along water courses or in large marshes.

SPECIAL HABITAT REQUIREMENTS: Sparsely vegetated islets or shorelines.

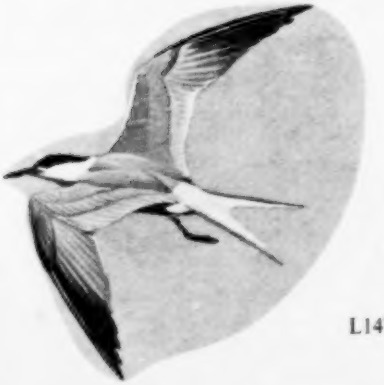
NEST: Usually found in compact colonies, but occasionally nests singly in the vicinity of other tern species in shallow depressions in the ground on bare sandy or rocky soil.

FOOD: Feeds almost entirely on fish 3 to 10 inches long, foraging on species and sizes that are most readily available; also takes crayfish, insects, nestlings and eggs of other birds, and rarely, carrion.

REFERENCES: Clapp et al. 1983, Johnsgard 1979, Ludwig 1965.

Common Tern

Sterna hirundo



RANGE: Breeds from south-central Mackenzie to southern Quebec and southern Labrador south to eastern Washington and southeastern Alberta, across to central Minnesota, northern Ohio, and northwestern Vermont, and locally along the Atlantic Coast to North Carolina; locally on the Gulf Coast in Texas, Mississippi, and western Florida. Winters in South America, rarely along the coasts of southern California, South Carolina, Florida, and the Gulf Coast.

STATUS: Common; of special concern on the blue list; declining on East Coast.

HABITAT: Uses a variety of habitats, mainly near water, often on islets, and usually in areas with little or no vegetation. Inhabits sparsely vegetated sandy islands, barrier beaches, marshy islands, small islands in salt marshes, or low, small, rocky islands in lakes and rivers. After nesting, typically found along shorelines, on exposed rocks and old pilings, and inshore over shallow coastal waters.

SPECIAL HABITAT REQUIREMENTS: Nesting areas with scant vegetation, isolated from disturbance and predation, and in close proximity to a source of food.

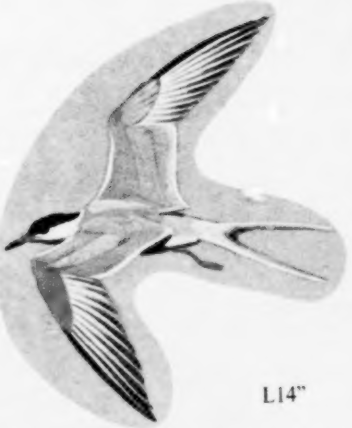
NEST: Builds nests in colonies; nests may vary from a slight hollow in sand or among pebbles to a well-built hollowed mound of grasses and seaweeds, may be in the open or near weeds, grasses, or bushes. Generally prefers sparse cover around the nest.

FOOD: Forages in shallow waters, margins of lakes, or along the coast, but tends to avoid muddy waters. Consumes a diet that varies with locality, including fish less than 6 inches, shrimp and other crustaceans, aquatic worms, insects, and some waste material.

REFERENCES: Burger and Lesser 1978, Forbush and May 1955, Johnsgard 1979, Palmer 1941, Tate and Tate 1982.

Forster's Tern

Sterna forsteri



RANGE: Breeds from southeastern British Columbia and central Alberta to central Manitoba, south to southern California and south-central Idaho, across to central Kansas, northern Iowa, and northwestern Indiana; along the Atlantic Coast from southern New York south locally to North Carolina; and along the Gulf Coast from Texas east to Louisiana. Winters along the Pacific and Atlantic Coasts from central California and Virginia south to Central America.

STATUS: Common.

HABITAT: Primarily inhabits large saltwater and freshwater marshes; also found on marshy bays, marshy parts of islands, marshy edges of streams and lakes, sloughs, dikes in evaporation ponds, estuarine islands, marshes adjacent to barrier beaches, and dredge-spoil islets. In winter, occurs in harbors, marshy bays, estuaries, lagoons, and inlets along coastal areas, occasionally occurring inland along lakes and ponds.

SPECIAL HABITAT REQUIREMENTS: Extensive marshy areas with vegetated nest sites partly open to water.

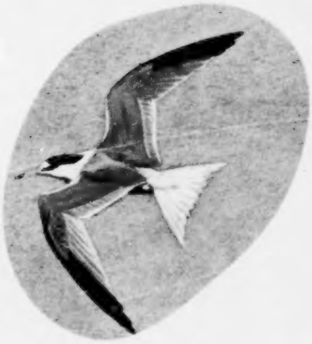
NEST: Usually found in small colonies, nesting on mats of floating dead vegetation, flattened reeds and cattails, large muskrat houses near the edges of open pools of water, floating rootstalks of cattails, or sometimes in a shallow depression in sand or mud. May also locate nests on sand or gravel bars, beaches, or grassy islands. Sometimes uses old or abandoned nests of western and pied-billed grebes.

FOOD: Feeds over or near the marshes in which it nests. Eats small fish, insects, crustaceans, and frogs.

REFERENCES: Bergman et al. 1970, Clapp et al. 1983, Forbush and May 1955, Johnsgard 1979, Low and Mansell 1983, McNicholl 1971.

Least Tern

Sterna antillarum



L8½"

RANGE: Breeds along the Pacific Coast from central California south to southern Baja California, inland along the Colorado, Red, Missouri, and Mississippi River systems from southern South Dakota, western Iowa, Southwestern Missouri, northwestern Indiana, central Louisiana, northeastern Texas, central Oklahoma, western Kansas, and central New Mexico, and along the Atlantic Coast from Maine to Florida and west to Texas. Winters along the Pacific Coast from Baja California and along the Gulf Coast to South America.

STATUS: Threatened in the Great Plains; endangered along California Coast; stable along Atlantic Coast, but is listed on New Jersey and Maine's threatened and endangered lists.

HABITAT: Inhabits river sandbars, inland islands, broad areas of sand or gravel beaches, and newly cleared land along the coast. Frequents salt plains in Oklahoma.

SPECIAL HABITAT REQUIREMENTS: Open, sandy coastal beaches, and river sandbars for nesting.

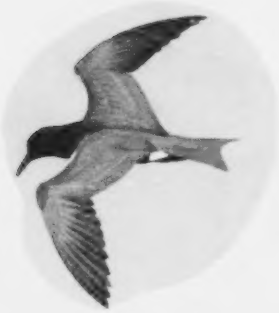
NEST: Nests solitarily or in scattered colonies. Nests in scrapes (with little or no lining) in sand or gravel (gravel or pebble substrates are preferred) above ordinary tides. Shares habitat with piping plover in the Great Plains.

FOOD: Skims the surface of the water or hovers and dives for food, sometimes spears fish with closed bill. Eats sand eels, shrimp, and small fish.

REFERENCES: Bent 1921, Tompkins 1959, Johnsgard 1979, Terres 1980.

Black Tern

Chlidonias niger



L9"

RANGE: Breeds from southwestern and east-central British Columbia and south-central Mackenzie to southern Quebec and southern New Brunswick, south locally to south-central California and northern Utah, across to Nebraska, south-central Illinois, Pennsylvania, and Maine. Nonbreeding birds occur in summer south on the Pacific Coast to Panama, and in eastern North America to the Gulf Coast. Winters in South America.

STATUS: Common; overall population is stable or decreasing slightly.

HABITAT: Found in taiga and on the plains and prairies, where it inhabits shallow marshes, open areas of deeper marshes, reed-bordered sloughs, natural ponds, lakes, fish and stock ponds, shallow river impoundments, wet meadows, river oxbows, ditches, edges of streams, and swampy grasslands. In migration, frequents freshwater and saltwater, occurring along the coast and along marshes, rivers, lakes and nearby cultivated fields.

SPECIAL HABITAT REQUIREMENTS: Aquatic habitats with extensive stands of emergent vegetation and large areas of open water.

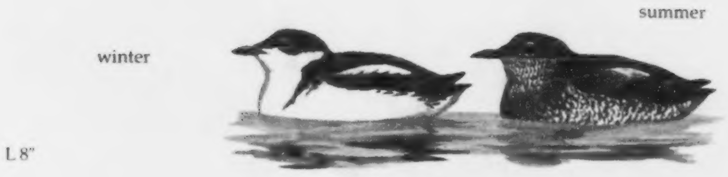
NEST: Often nests in small colonies, but occasionally nests singly. Usually places nest on a floating mass of vegetation such as cattails and bulrushes and anchored to surrounding vegetation, on floating pieces of wood, or in a slight hollow atop a muskrat house. Prefers areas of emergent vegetation over water up to 3 feet deep or near open water. Sometimes uses abandoned nests of other birds including grebes, Forster's terns, and American coots.

FOOD: Does not compete strongly with fish-eating species; consumes a diet that includes aquatic and land insects, worms, small mollusks, crustaceans, and a few small fishes and grubs.

REFERENCES: Clapp et al. 1983, Forbush and May 1955, Johnsgard 1979, Low and Mansell 1983, McNicholl 1971, Tate and Tate 1982.

Marbled Murrelet

Brachyramphus marmoratus



RANGE: Breeds from Alaska south to central California. Winters, off shore, from southern Alaska to central California (casually to southern California).

STATUS: Locally common.

HABITAT: Inhabits coniferous forests, coastal islands, and inland lakes, usually within 12 miles from ocean.

SPECIAL HABITAT REQUIREMENTS: Old growth coniferous forests.

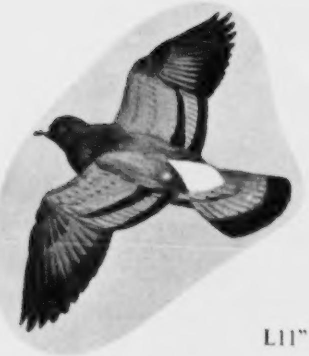
NEST: Nests solitarily on bare rocks, below ledges, in rock cavities, on the ground, and in coniferous trees. Usually nests within 4 miles of the ocean but occasionally farther inland.

FOOD: Dives for food and consumes mostly small fish and various crustaceans but diet varies regionally.

REFERENCES: Terres 1980, Day et al. 1983, Carter and Sealy 1986.

Rock Dove

Columba livia



L11"

RANGE: Resident from southern Alaska and southern Canada south throughout North America. Introduced; originally an Eurasian species.

STATUS: Common.

HABITAT: May inhabit narrow, steep-walled canyons and rocky cliffs, but far more commonly found near human habitations.

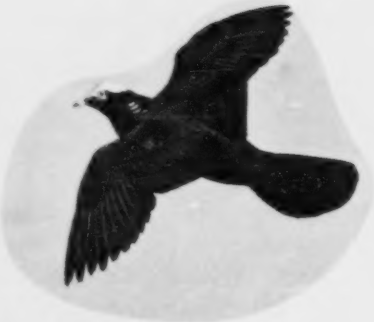
NEST: Prefers to nest on or in structures that provide narrow ledges similar to cliff ledges. Constructs a flimsy nest on stone, brick, and concrete buildings in cities, high upon ledges, under windows, under bridges, on monuments, in barns or other man-made structures, preferably in semi-dark cavities. May nest singly or in colonies.

FOOD: Commonly feeds on parkland, sidewalks, and parking lots in cities; cultivated fields; feedlots; and wastelands. Gleans seeds of weeds, grasses, and grains, takes human handouts, and eats a few berries and tender roots of grasses.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Terres 1980.

White-crowned Pigeon

Columba leucocephala



L11"

RANGE: Breeds in southern Florida on islets in the Florida Keys, throughout Florida Bay, the Lesser Antilles, and islets of Central America. Nonbreeding birds may occur in summer in southern peninsular Florida. Winters from southern peninsular Florida and the Florida Keys throughout most of the breeding range to central America.

STATUS: Common.

HABITAT: Generally gregarious; breeds and roosts in large concentrations on brushy, small, low islands and keys, among coastal mangroves and pines.

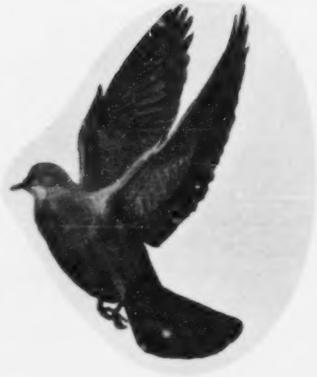
NEST: Nests colonially, but not with or near other colonial species. Builds nest from a few feet to 15 feet or more above ground, on top of cactus or bushes, or high in mangroves; occasionally low and over water.

FOOD: Forages in open forests, woodlands, and scrubs and eats seeds, berries, and a few insects.

REFERENCES: Cottam and Knappen 1939, Harrison 1975, Sykes in Farrand 1983b, Terres 1980, Wiley and Wiley 1979.

Red-billed Pigeon

Columba flavirostris



L11"

RANGE: Breeds in the lower and middle Rio Grande Valley in southern Texas south through Mexico into Central America; mostly absent in winter.

STATUS: Local and uncommon.

HABITAT: Inhabits semiarid woodlands near water. In Texas, it is found in river thickets containing tall timber and a thick undergrowth of thorny shrubs including ebony blackbead, huisache, mesquite, baldcypress, great leucaena, Mexican ash, elm, black willow, and hackberry. Often perches on exposed bare branches high in trees.

SPECIAL HABITAT REQUIREMENTS: Tall dense brush with small patches of tall trees.

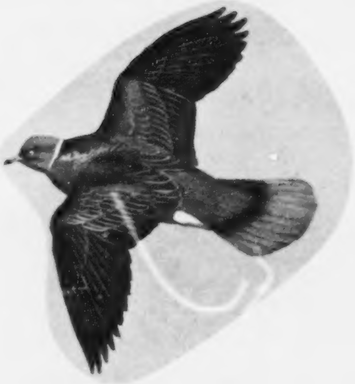
NEST: Nests 8 to 30 feet above ground on a horizontal tree branch, in a clump of small branches, or in a tree concealed by a tangle of vines or brush.

FOOD: Forages high in the crowns of trees and in stubble fields on a diet that includes fruits of hackberries, condalia, and wild grape; acorns; and waste grains.

REFERENCES: Bent 1932, Oberholser 1974a, Terres 1980.

Band-tailed Pigeon

Columba fasciata



L13"

RANGE: Breeds from southeastern Alaska and southwestern British Columbia south through the mountains of Washington, Oregon, California, and extreme western Nevada to Baja California; and from southern Nevada, Arizona, central Utah, north-central Colorado, New Mexico, and western Texas south to Honduras. Winters from central California, central Arizona, and western Texas south to Honduras.

STATUS: Locally common.

HABITAT: Along the Pacific Coast, inhabits a variety of forest lands with western hemlock, western redcedar, and Douglas-fir to ponderosa pine, white fir, or incense cedar. In Oregon and Washington, prefers forest land with a good interspersion of seral stages and openings; in California, prefers forests, woodlands, or chaparral with an abundance of oak. In the interior, occupies habitats ranging from montane oak woodlands to arid woodlands of pinyon pine and oaks, and from agricultural areas near forests to berry-producing areas at 11,000 feet elevation. Occasionally found in spruce-fir associations characterized by Engelmann spruce, subalpine fir, lodgepole pine, limber pine, and aspen, but prefers sites dominated by ponderosa pine and Gambel oak.

SPECIAL HABITAT REQUIREMENTS: Mature conifers or broad leaved trees at least 8 feet tall for nesting and a source of mineral water or salt deposits in early fall and winter.

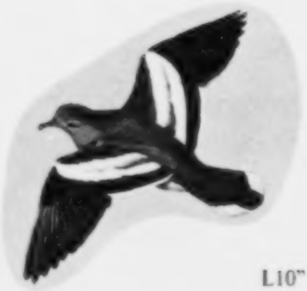
NEST: Nests in coniferous or deciduous trees usually located near a clearing and on a moderate to steep slope or precipice. Conceals nest on horizontal branches typically 15 to 40 feet high, rarely on the ground.

FOOD: Gleans sometimes exclusively on one species or source of food as long as the supply lasts. Mainly eats mast and berries, but also eats acorns, pine nuts, pinyon nuts, blossoms, green and ripe fruits, and some waste grains.

REFERENCES: Jeffrey 1977, Johnsgard 1975a, Neff 1947, Peeters 1962.

White-winged Dove

Zenaida asiatica



L10"

RANGE: Breeds from southeastern California and southern Nevada to southwestern Texas south, through Central America into western South America. Introduced and established in southern Florida. Winters generally in the breeding range, but northern birds are mostly migratory, casually ranging north to northern California and Colorado and occurring regularly along the Gulf Coast east to Florida.

STATUS: Locally abundant.

HABITAT: Occupies a variety of habitats in semiarid woodlands. Prefers tall, dense, or brushy riparian woodlands, with trees from 15 to 25 feet tall and an understory of thorny shrubs. Also occupies desert scrub, desert grassland, oak woodland, chaparral, valleys of desert mountains, and shade and fruit trees of agricultural areas, country roadsides, and suburban residential areas.

SPECIAL HABITAT REQUIREMENTS: Nest sites with trees of low to medium height having dense foliage and fairly open ground cover.

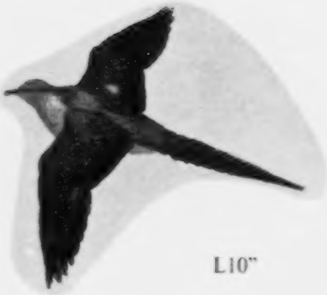
NEST: Builds nests on relatively horizontal branches of a variety of trees and large shrubs in shaded sites, preferably in the interior of woodlands and thickets.

FOOD: Forages in shelter of thickets, weeds, or fields for seeds. Also eats mast, fruit, and some insects.

REFERENCES: Brown 1977, Cottam and Trefethen 1968, Neff 1940, Oberholser 1974a.

Mourning Dove

Zenaida macroura



RANGE: Breeds from southern and central Alberta to southern New Brunswick and Nova Scotia south to Mexico. Winters primarily from northern California east across the central United States to Iowa, southern Michigan, southern Ontario, New York, and New England south throughout the breeding range to central Panama.

STATUS: Abundant.

HABITAT: Occupies a broad range of habitats from desert areas close to water to a variety of wooded habitats, but avoids densely forested regions. Inhabits open country, especially fields, orchards, or generally weedy areas having an abundance of grains and seeds. Also inhabits open mixed woodlands and wood edges, shelterbelts, church and cemetery sites, evergreen plantations, suburbs, and cities.

SPECIAL HABITAT REQUIREMENTS: Open country with some bare ground and adequate foods.

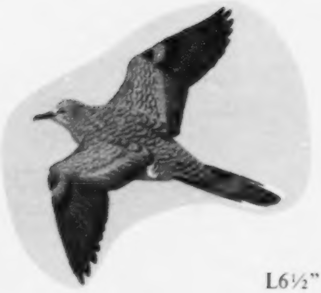
NEST: Loosely colonial or solitary. Generally nests on horizontal branches in shrubs and trees, especially conifers up to 100 feet, but typically 10 to 25 feet above ground, and occasionally on the ground.

FOOD: Feeds primarily on weed seeds and waste grains. Also eats a few insects, small snails, fruits, and nuts.

REFERENCES: Davison and Sullivan 1963, DeGraff et al. 1980, Forbush and May 1955, Hanson and Kosack 1963, Johnsgard 1975a, Keeler 1977.

Inca Dove

Columbina inca



L6½"

RANGE: Resident from extreme southeastern California, central Arizona, southern New Mexico, and central Texas south to Costa Rica.

STATUS: Common to abundant.

HABITAT: Primarily found in the vicinity of human habitations, especially around introduced broad-leaved deciduous trees, exotic conifers, and native live oaks in areas with little or no understory. Inhabits poultry and livestock feedlots, yards, gardens, orchards, school grounds, city parks, and roads through brushy mesquite pastures, usually near a source of water. Roosts in evergreen trees.

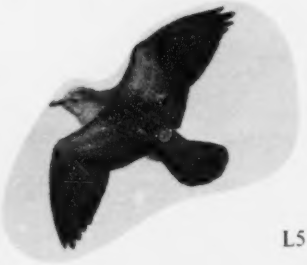
NEST: Nests on a horizontal fork or flattened tree limb or in a bush, 4 to 25 feet above ground in a brushy pasture, or more often in the immediate vicinity of houses. Builds nests in native shrubs (including catclaw and chollas), in baldcypress, in shade trees, on top of utility poles, in hanging baskets near a house, and sometimes in nests of other species including mourning doves, mockingbirds, and cactus wrens. Generally uses nests for 2 or more consecutive nestings.

FOOD: Feeds almost entirely on the ground, taking seeds of a wide variety of native plants. Eats wheat, cracked corn, oats, and milo readily if available.

REFERENCES: Anderson and Anderson 1948, Harrison 1979, Johnston 1960, Oberholser 1974a.

Common Ground-Dove

Columbina passerina
(formerly Ground Dove)



L5½"

RANGE: Resident from southern California, central Arizona, southern New Mexico, central Texas, the Gulf Coast, and South Carolina south to South America.

STATUS: Common, locally abundant.

HABITAT: Inhabits sparsely wooded areas with low undergrowth, roadsides, fields, orchards, sandy reefs, and open sandy areas in forest and savannah; over much of its range, is now primarily around farms and towns. In Texas, occurs in grassy mesquite-live oak-cactus savannah and to some extent scrubby juniper-oak areas; in Georgia and South Carolina, occurs mainly near beaches and sea islands with tall beach grass. In Arizona, inhabits river bottomlands with mesquite or tamarisk woods.

SPECIAL HABITAT REQUIREMENTS: Open areas with plants that produce small seeds.

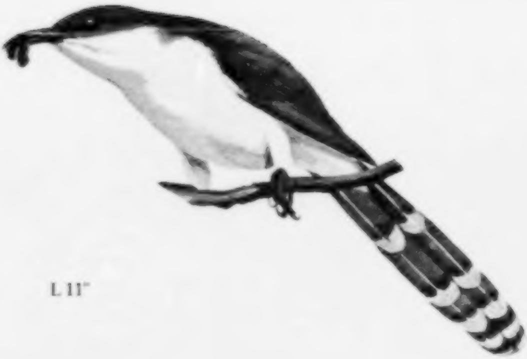
NEST: Uses a wide range of sites for nesting. May nest in a slight hollow on the ground, in a low bush, or in a tree, up to 25 feet above the ground.

FOOD: Feeds primarily on small seeds gathered from gardens and lawns, along roadsides, in fields, weed patches, or grassy areas. Also takes a few berries and some insects.

REFERENCES: Bent 1932, Forbush and May 1955, Goodwin 1967, Oberholser 1974a, Phillips et al. 1964.

Black-billed Cuckoo

Coccyzus erythropthalmus



RANGE: Breeds from east-central and southeastern Alberta and southern Saskatchewan to New Brunswick and Nova Scotia south, at least locally, to eastern Colorado, north-central Texas, northern Arkansas, northern Alabama, and the Carolinas. Winters in South America.

STATUS: Common.

HABITAT: Prefers extensive areas of upland woods that provide a variety of trees, bushes, and vines. Also occurs in brushy pastures, hedgerows, open woodlands, orchards, thickets, and along wooded roadsides.

SPECIAL HABITAT REQUIREMENTS: Low, dense, shrubby vegetation.

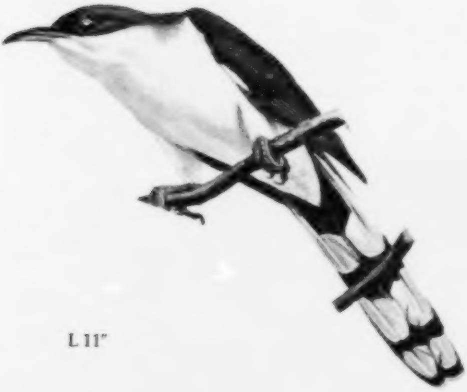
NEST: Selects nest sites that are well concealed by overhanging branches and leaf clusters. Usually nests in shrubs or on a low tree branch, typically 4 to 6 feet above ground. Occasionally lays eggs in the nests of other birds.

FOOD: Feeds primarily on caterpillars, especially tent caterpillars; also other insects, spiders, and a few tiny mollusks, fishes, and wild fruits and berries.

REFERENCES: Beal 1904, Bent 1940a, DeGraff et al. 1980, Herrick 1910, Johnsgard 1979, Spencer 1943.

Yellow-billed Cuckoo

Coccyzus americanus



L 11"

RANGE: Breeds from interior California and northern Utah to southwestern Quebec and southern New Brunswick, south to southern Arizona and into Mexico. Winters in South America.

STATUS: Common.

HABITAT: Favors moderately dense thickets near watercourses, second-growth woodlands, deserted farmlands overgrown with shrubs and brush, and brushy orchards for habitat. Also inhabits open woods, avoiding extremely dense woods and high elevations.

SPECIAL HABITAT REQUIREMENTS: Low, dense, shrubby vegetation.

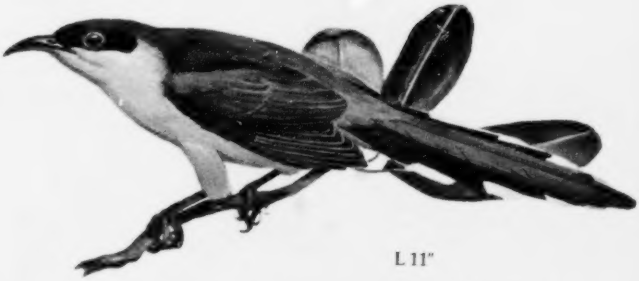
NEST: Prefers to nest in thick bushes overgrown with vines or in trees on horizontal limbs, typically 4 to 8 feet above ground. Conceals nest with surrounding foliage.

FOOD: Forages among leaves for food, which consists mainly of caterpillars, especially tent caterpillars and fall webworms. Also eats other insects and spiders, some small wild fruits, some frogs, and occasionally a small lizard.

REFERENCES: Beal 1904, Bent 1940a, DeGraff et al. 1980, Johnsgard 1979, Preble 1957, Tate and Tate 1982.

Mangrove Cuckoo

Coccyzus minor



RANGE: Breeds in southern Florida from Tampa Bay and Miami southward in coastal areas, including the Florida Keys through Mexico to South America. Winters throughout the breeding range, but mostly south of Florida.

STATUS: Rare and local.

HABITAT: Inhabits red and black mangrove thickets and swamps near saltwater. and upland hardwood hummocks.

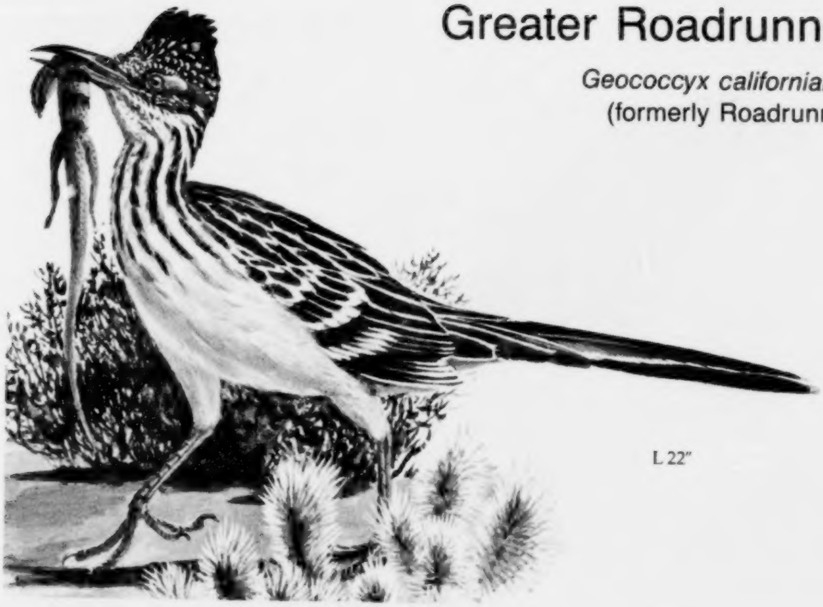
NEST: Typically builds nest on a horizontal mangrove branch, that is indistinguishable from the nest of the yellow-billed cuckoo.

FOOD: Often feeds in open fields and clearings near thickets on caterpillars and other insects, spiders, and a few small fruits and wild berries.

REFERENCES: Bent 1940a, Harrison 1975, Sykes in Farrand 1983b, Terres 1980.

Greater Roadrunner

Geococcyx californianus
(formerly Roadrunner)



RANGE: Resident from northern California (rarely) and western and central Nevada east to southern Kansas and north-central Louisiana south to Mexico.

STATUS: Common.

HABITAT: Typically associated with desert regions, but also found in chaparral, grasslands, open woodlands of pine and oak, agricultural areas, and moist woodlands. Frequents edge habitats provided by a mixture of open land, brush, and forest; also at home among tall pines and magnolias or mesquite and cactus.

SPECIAL HABITAT REQUIREMENTS: Bare areas with some scattered trees and bushes.

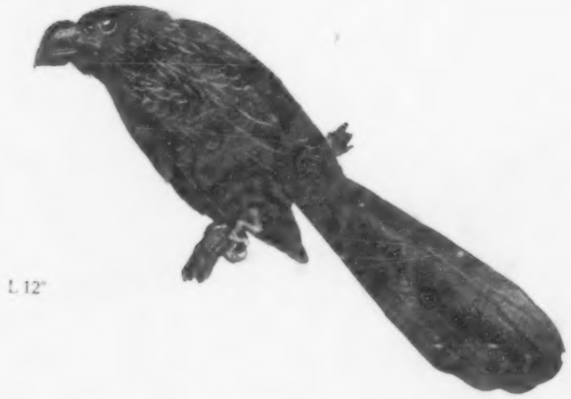
NEST: Usually nests in a low tree, bush, thicket, or clump of cactus from 3 to 15 feet above ground, rarely on the ground. In desert regions, builds nest so that bands of shade cross the nest during the extreme heat of the day; prefers staghorn cholla for nesting site in arid regions.

FOOD: Feeds primarily on animals, with about 10 percent of the diet consisting of vegetable matter. Eats a great variety of insects, spiders, scorpions, snails, lizards, and small snakes; also eats some young birds and small mammals, and fruits and seeds.

REFERENCES: Bryant 1916, Johnsgard 1979, Oberholser 1974a, Ohmart 1973, Terrill in Farrand 1983b.

Smooth-billed Ani

Crotophaga ani



RANGE: Resident in central and southern Florida from Tampa Bay and Merritt Island region southward, especially from Lake Okeechobee area to Dade County into Central and South America.

STATUS: Locally common.

HABITAT: Inhabits dense brush or hedgerows near fields, pastures, and marshes, roadside thickets, gardens and thick woods in cities, towns, and around farms.

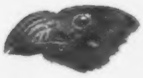
NEST: May nest singly or communally, with several females laying their eggs in a single nest. The nest is constructed in trees or dense shrubs 6 to 30 feet above ground, commonly near human habitation.

FOOD: Forages in moist open meadows for grasshoppers, crickets, moths, green tree frogs, and chameleons.

REFERENCES: Harrison 1975, Kaufman in Farrand 1983b, Merritt 1951.

Groove-billed Ani

Crotophaga sulcirostris



RANGE: Resident in central and southern Texas and southern Louisiana south through Mexico and Central America to South America.

STATUS: Common to uncommon.

HABITAT: Tolerant of a wide range of ecological conditions, inhabiting brushy pastures, orchards, light second growth, lawns and clearings near homes, marshes, and moist thickets along rivers. Also found in semi-desert areas with scattered cacti and acacias and thickets of ebony blackbead, mesquite, and Jerusalem-thorn. Frequently accompanies livestock, which stir insects from the grass.

SPECIAL HABITAT REQUIREMENTS: Open areas with low vegetation for foraging, and trees and bushes for roosting and nesting.

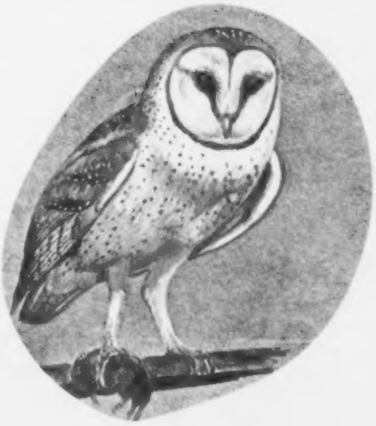
NEST: Builds nest from 2 to 25 feet up in densely foliated trees or, in arid regions, in opuntias and other cacti. May nest singly or communally, with several females laying their eggs in a single nest.

FOOD: Forages in pastures and farm fields, feeding on insects stirred up by cattle. Eats mainly insects, including grasshoppers, termites, and roaches, plus spiders, small lizards, and berries.

REFERENCES: Kaufman in Farrand 1983b, Oberholser 1974a, Skutch 1959, Terres 1980.

Common Barn-Owl

Tyto alba
(formerly Barn Owl)



L14"

RANGE: Resident from southwestern British Columbia, southern Idaho, and Montana east to southern Vermont and Massachusetts south through the United States to South America. Northernmost populations are partially migratory, wintering south to southern Mexico and the West Indies.

STATUS: Uncommon; overall population level is low, but stable.

HABITAT: Found in open to semiopen habitats such as prairie, farmland, savannah, marshland, and desert, but prefers the vicinity of farms and towns. Avoids woodlands and higher elevations.

SPECIAL HABITAT REQUIREMENTS: Abundant supply of small mammals for food, and hollow trees, old buildings, barns, cavities, or caves for nesting and roosting.

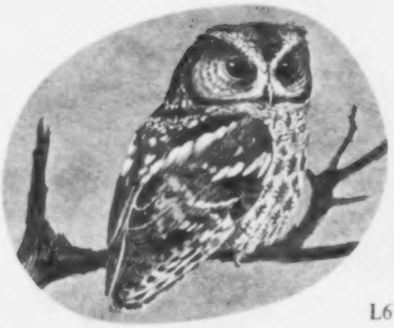
NEST: Nests in a variety of sites. Favors natural tree hollows, especially in live oaks near a marshy meadow. Typically nests in old barns, church and school steeples, silos, or abandoned buildings. Also uses protected ledges along cliff faces, abandoned underground burrows of badgers, woodchucks, or other mammals, caves, cavities in high stream banks (8 to 10 feet above water level), abandoned nests of crows, hawks, or magpies, and artificial nest sites. Will return to the same nest site year after year if undisturbed.

FOOD: Hunts by night over marshes, meadows, fields, barnyards, brushy areas, pastures, and other open areas for small mammals, especially mice, and occasionally small birds and large insects. Also eats some frogs, snakes, lizards, and crayfish.

REFERENCES: Coats in Farrand 1983b, DeGraff et al. 1980, Hawbecker 1945, Heintzelman 1979, Johnsgard 1979, Karalus and Eckert 1974, Tate and Tate 1982.

Flammulated Owl

Otus flammeolus



RANGE: Breeds locally from southern British Columbia, southern Idaho, and northern Colorado south to southern California, southern Arizona, southern New Mexico, western Texas and Mexico. Winters in Mexico, casually north to southern California.

STATUS: Rare to locally common.

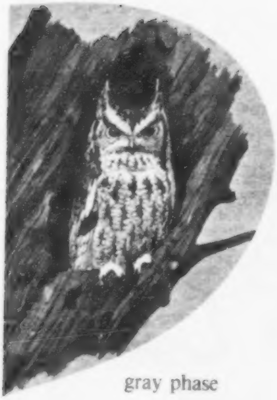
HABITAT: Inhabits forests of the western mountains, mostly from 4,500 to 7,800 feet but as high as 10,000 feet elevation. Prefers woods with dense, thicketlike cover close to relatively open areas. Favors ponderosa pine forests but also occurs in forests of spruce-fir, Douglas-fir, lodgepole pine, aspen, and pinyon-juniper.

SPECIAL HABITAT REQUIREMENTS: Some undergrowth or intermixture of oaks in the forest.

NEST: Usually nests in abandoned flicker or other woodpecker nest cavities from 7 to 25 feet above ground in aspen, oaks, or pines. Will forceably evict a flicker if an abandoned cavity is not available; rarely nests in holes constructed by bank swallows.

FOOD: Consumes a diet of insects and other invertebrates such as spiders, scorpions, and centipedes; prefers moths, beetles, crickets, and grasshoppers and will sometimes eat small birds and small mammals.

REFERENCES: Coats in Farrand 1983b, Heintzelman 1979, Karalus and Eckert 1974, Oberholser 1974a, Phillips et al. 1964.



gray phase

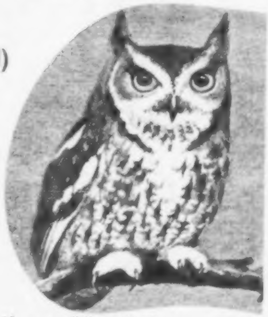
Eastern Screech-Owl

Otus asio

Western Screech-Owl

Otus kennicottii
(formerly Screech Owl)

L8"



red phase

RANGE: Eastern Screech-Owl; Resident from southern Manitoba and northern Minnesota to southwestern Quebec and Maine, south through the eastern United States, eastern Montana, eastern Colorado, and western Oklahoma to southern Texas, and across to southern Florida. Western Screech-Owl; Resident from south-coastal and southeastern Alaska, coastal and southern British Columbia, and northern Idaho to southeastern Colorado and extreme western Oklahoma, south to Mexico and western Texas.

STATUS: Common; populations are declining in the West, but are stable in the East.

HABITAT: Found in a variety of habitats, favors oak and riparian woodlands in the West, and open woodlands adjacent to meadows, marshes, or fields in the East. Also inhabits orchards, shade trees in towns and cities, small woodlots, and deciduous forests. Prefers areas with widely spaced trees interspersed with grassy open spaces for hunting.

SPECIAL HABITAT REQUIREMENTS: Cavities for nesting and roosting in trees with a minimum dbh of 12 inches.

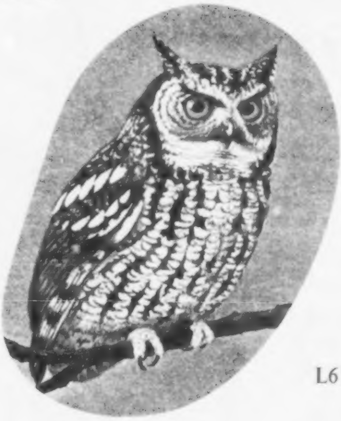
NEST: Nests in natural cavities in trees or in old woodpecker holes, especially those of the northern flicker and pileated woodpecker. Chooses cavities with openings 3 to 5 inches in diameter that are typically 5 to 30 feet (but up to 50 feet) above the ground. Many use same cavity for many years; will use artificial cavities.

FOOD: Hunts for its food in grassy openings, fields, meadows, or along wooded field margins or streams. Primarily takes rodents, especially meadow voles, but also eats insects, scorpions, spiders, centipedes, crayfish, amphibians, reptiles, fishes, and small birds.

REFERENCES: DeGraff et al. 1980, Earhart and Johnson 1970, Heintzelman 1979, Johnsgard 1979, Karalus and Eckert 1974, Scott et al. 1977, Tate and Tate 1982, Thomas et al. 1979, Van Camp and Henny 1975.

Whiskered Screech-Owl

Otus trichopsis
(formerly Whiskered Owl)



L6½"

RANGE: Resident from southeastern Arizona south to Nicaragua.

STATUS: Common.

HABITAT: Inhabits scattered to dense woodlands on the slopes of valleys and in canyons, from 4,000 to 7,000 feet (usually between 5,500 and 6,500) feet in elevation. Occurs in dense oak, oak-pine, and sycamore woodlands, avoiding forests of pure pines or firs.

SPECIAL HABITAT REQUIREMENTS: Cavities in trees for nesting.

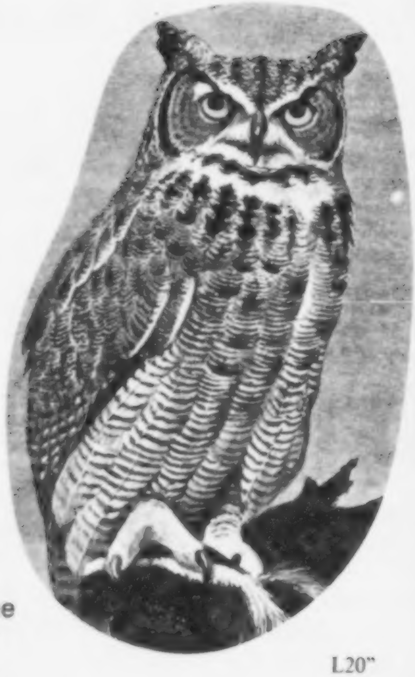
NEST: Nests in natural cavities in trees or in abandoned nest cavities of northern flicker and other woodpeckers. Prefers cavities in large branches or stubs to cavities in tree trunks. Favors relatively deep holes with bottoms 14 to 16 inches below the cavity entrance. Usually chooses a nest site that is 10 to 20 feet above the ground, generally in white oaks, but also uses other species.

FOOD: Consumes a diet mostly of insects and other invertebrates, including crickets, large moths, beetles, grasshoppers, large caterpillars, scorpions, centipedes, some small mammals, and rarely, small birds.

REFERENCES: Heintzelman 1979, Karalus and Eckert 1974.

Great Horned Owl

Bubo virginianus



L20"

RANGE: Breeds from western and central Alaska and central Yukon to Labrador and Newfoundland, south throughout the Americas to Tierra del Fuego. Winters generally throughout the breeding range, with the northernmost populations being partially migratory.

STATUS: Common.

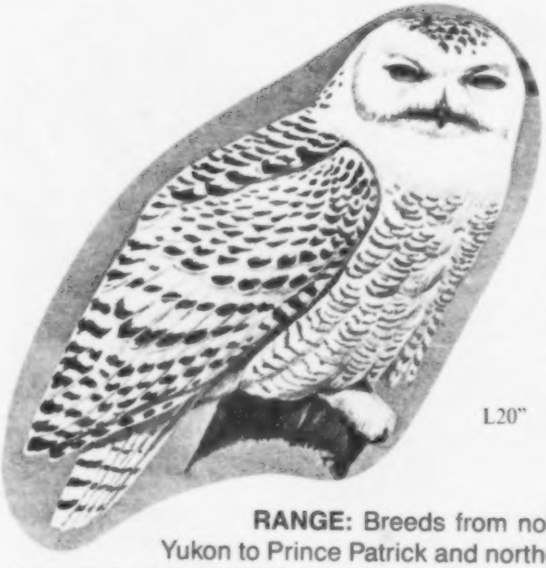
HABITAT: Occurs in a wide variety of forested habitats. Inhabits open coniferous, deciduous, or mixed woodlands, orchards, second-growth forests, marshes, swamps, riverine forests, partially wooded slopes, brushy hillsides, farm woodlots, large city parks, and rocky canyons well away from forest cover. In the South, prefers baldcypress hummocks and expansive dense palmetto woodlands interspersed with scattered pine.

SPECIAL HABITAT REQUIREMENTS: Large abandoned bird nests or large cavities for nesting.

NEST: Uses a wide variety of nest sites up to 70 feet aboveground; frequently abandoned nests of hawks, herons, or crows. Also uses large tree cavities, crotches, stumps, caves, and ledges. Occasionally, constructs a nest but most often uses abandoned nests.

FOOD: Prefers open areas near woodlands such as marshes or meadows for hunting. Consumes an extremely varied diet; will attempt to kill animals up to the size of a turkey or porcupine, but prefers small to medium-sized mammals and birds. Also preys upon reptiles, amphibians, large insects, and fishes; rarely consumes carrion.

REFERENCES: DeGraff et al. 1980, Earhart and Johnson 1970, Heintzelman 1979, Johnsgard 1979, Karalus and Eckert 1974, Sprunt 1955.


L20"

Snowy Owl

Nyctea scandiaca

RANGE: Breeds from northern Alaska and northern Yukon to Prince Patrick and northern Ellesmere islands, south to coastal western Alaska, northern Mackenzie and southern Keewatin across to northern Quebec and northern Labrador. Winters irregularly south to southern Canada, Minnesota, and New York, and occasionally further south.

STATUS: Common in the far North, rare and local in the conterminous United States.

HABITAT: Found north of the tree line in arctic tundra, where it inhabits moss- and lichen-covered flatlands, lowlands, and valleys well dotted with frost-heave mounds, hillocks, or rocks. Avoids very marshy areas with no raised sites. During years of low lemming abundance, moves southward into the conterminous United States, onto open fields, sandy beaches, barrier islands, and marshes.

SPECIAL HABITAT REQUIREMENTS: Raised sites such as frost-heave mounds several yards in diameter and as much as 2 to 3 feet above the ground, large rocks, or other abrupt rises in the ground for roosting and nesting.

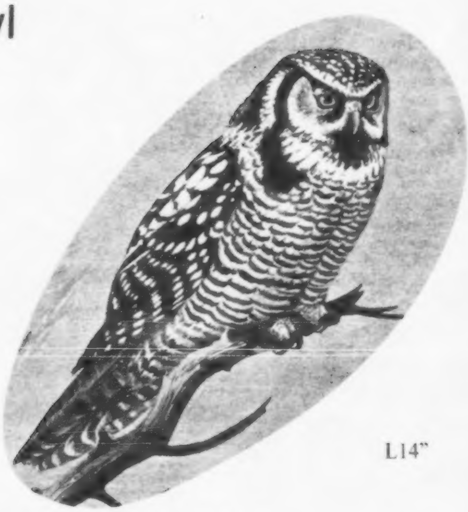
NEST: Generally nests at elevations less than 650 feet. Nests in a shallow depression on top of a frost-heave mound or other raised site, occasionally on a gravel bank, tidal flat, or on slopes above a marsh or lake. Rarely, nests in an abandoned eagle nest high in a tree.

FOOD: Kills a wide variety of mammals and birds, especially lemmings and mice. Throughout its summer and winter range, also preys on a variety of rodents, rabbits, waterfowl, shorebirds, songbirds, fish—almost any small animal that can be caught.

REFERENCES: Heintzelman 1979, Karalus and Eckert 1974, Udvardy 1977, Watson 1957.

Northern Hawk-Owl

Surnia ulula



RANGE: Breeds from tree-line in western and central Alaska to southern Keewatin, central Labrador south to southern Alaska, northern Minnesota, northern Michigan, and New Brunswick. Winters from the breeding range southward irregularly to southern Canada and northern Minnesota, and casually the northern United States.

HABITAT: Inhabits much of the northern open coniferous or mixed forests, forest edges, clearings, old burns, dense brushy areas (especially tamarack), scrubby second-growth woodlands, and muskeg.

SPECIAL HABITAT REQUIREMENTS: Open woodlands with cavities for nesting.

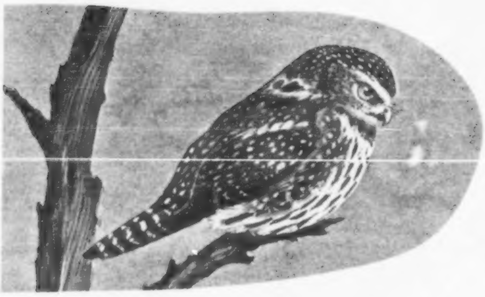
NEST: Usually nests in natural cavities or in enlarged holes of pileated woodpeckers and flickers, but also in birch, spruce, and poplar snags. Occasionally nests on cliffs or in crow's nests.

FOOD: Hunts extensively during the day, preying on small mammals (especially mice), birds, and insects. In summer, consumes primarily small mammals and insects. Preys on ptarmigan during winter when other foods are scarce.

REFERENCES: Bent 1938, Henderson 1919, 1925, Mendall 1944.

Northern Pygmy-Owl

Glaucidium gnoma
(formerly Pygmy-Owl)



RANGE: Resident from southeastern Alaska, British Columbia, southwestern Alberta, and western Montana south, mostly in mountainous regions through southern California and interior Mexico to Central America, and extending east as far as central Colorado, central New Mexico, and extreme western Texas.

STATUS: Common.

HABITAT: Inhabits deciduous, coniferous, and mixed forests in the West. In Arizona, prefers mixed oak-pine forests on south-facing slopes from 4,000 to 13,000 feet in elevation, but tends to frequent coniferous forests at the higher elevations; in California, occurs up to 6,000 feet, primarily in mixed scattered hardwoods and conifers. In the Rocky Mountains, occurs from 5,000 to 10,000 feet in dense pine forests or open areas with scattered trees; along the Pacific Coast, prefers dense damp forests of firs, redwoods, and cedars.

SPECIAL HABITAT REQUIREMENTS: Natural cavities or old woodpecker holes for nesting.

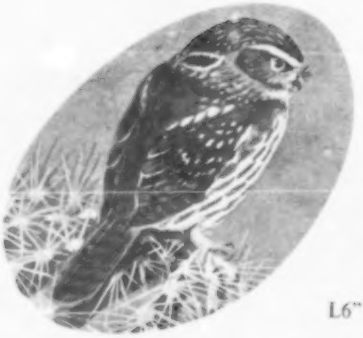
NEST: Nests in abandoned cavities of the hairy woodpecker or northern flicker or natural cavities. Chooses cavities from 8 to 100 feet above the ground; in Rocky Mountains uses cavities up to 24 feet above the ground; in California, from 40 to 75 feet, and along the coast from 50 to 60 feet (but up to 100 feet) above the ground. May use the same nest site for several years.

FOOD: Primarily preys upon mice and large insects; also eats other small mammals, small birds, spiders, scorpions, centipedes, small snakes, lizards, and toads.

REFERENCES: Earhart and Johnson 1970, Heintzelman 1979, Karalus and Eckert 1974.

Ferruginous Pygmy-Owl

Glaucidium brasilianum
(formerly Ferruginous Owl)



L6"

RANGE: Resident from south-central Arizona and southern Texas south through Mexico to South America.

STATUS: Rare and local.

HABITAT: Inhabits wooded river bottoms of cottonwoods and mesquite, but prefers densely vegetated desert areas with saguaro and cholla cacti and mesquite thickets. It is found from sea level to 4,000 feet.

SPECIAL HABITAT REQUIREMENTS: Abandoned woodpecker holes for nesting.

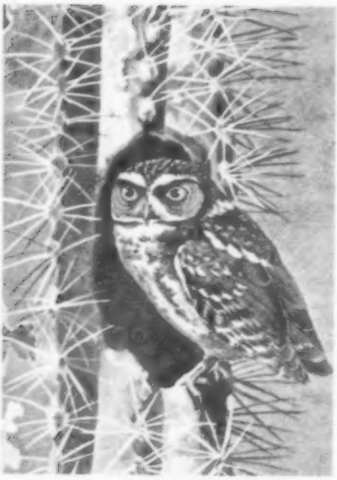
NEST: Nests in abandoned woodpecker cavities from 10 to 40 feet above the ground in cottonwoods, mesquite, and most often in saguaro cactus. May use same nest sites year after year.

FOOD: Hunts from a perch, preying primarily on crickets, other large insects, and lizards. Also eats scorpions, caterpillars, and small birds and mammals.

REFERENCES: Heintzelman 1979, Karalus and Eckert 1974, Oberholser 1974a, Terres 1980, Terrill in Farrand 1983b.

Elf Owl

Micrathene whitneyi



L5½"

RANGE: Breeds from southeastern California, extreme southern Nevada, central Arizona, southwestern New Mexico, and western and southern Texas south to Mexico. Winters in Mexico.

STATUS: Common.

HABITAT: Prefers arid, low elevation desert areas overgrown with cacti, mesquite, and creosote bush, or with agave, ocotillo, and cactus desert scrub. Also inhabits riparian cottonwood and willow groves; mesquite floodplains; walnut, sycamore, and oak woodlands; and juniper, pinyon pine, and oak woodlands up to 7,000 feet in elevation. Avoids pure stands of pine, but will inhabit almost every other type of dry, woody vegetation.

SPECIAL HABITAT REQUIREMENTS: Abandoned woodpecker holes for nesting.

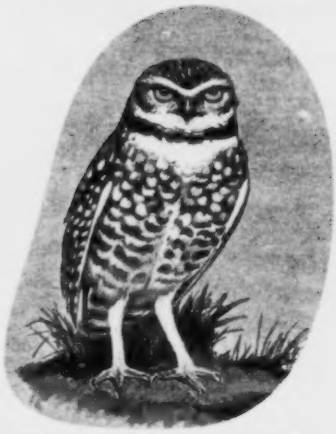
NEST: Nests in abandoned woodpecker holes, especially in saguaro cactus but also in agave bloom stalks, tree stumps, cottonwoods, mesquite, sycamore, pines, walnut oaks, or willows growing on mesas and desert slopes and in canyons. Nests generally 10 to 30 feet above the ground.

FOOD: Preys primarily on large insects but also eats scorpions and rarely lizards, snakes, and small birds.

REFERENCES: Heintzelman 1979, Karalus and Eckert 1974, Ligon 1968, Oberholser 1974a.

Burrowing Owl

Athene cunicularia



L8"

RANGE: Breeds from southern interior British Columbia to southern Manitoba south through eastern Washington, central Oregon, and California to Baja California, east to western Minnesota, western Missouri, Oklahoma, eastern Louisiana, and south to Mexico and Central America; also in Florida. Winters throughout breeding range except for the northern portions in the Great Basin and Great Plains regions.

STATUS: Locally common; populations declining due to widespread elimination of burrowing rodents, notably prairie dogs and ground squirrels.

HABITAT: Prefers nonforested plains, grasslands, deserts, and sometimes open areas such as vacant lots near human habitations or airports. Largely depends on mammals that dig burrows in open areas with short vegetation for nesting, roosting, and for escape. Commonly perches on fence posts, bushes, utility wires, roadside billboards, and burrow mounds.

SPECIAL HABITAT REQUIREMENTS: Burrows of colonial burrowing mammals, especially prairie dogs and ground squirrels in open spaces.

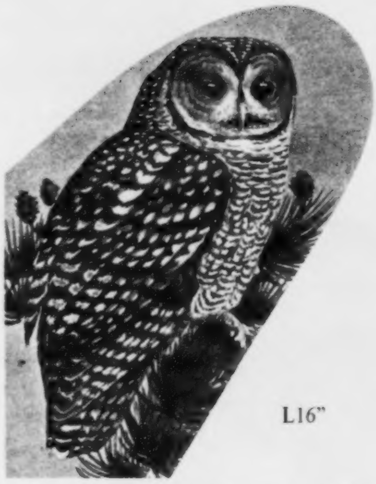
NEST: In the West, often nests in colonies in abandoned burrows of prairie dogs, and ground squirrels; also nests in burrows of woodchucks, foxes, badgers, coyotes, and armadillos. In Florida, nests in gopher tortoise burrows. Can excavate own burrow but usually enlarges burrows started by mammals and uses same burrow for years if not disturbed.

FOOD: Hunts by ground foraging, hovering, from a perch, or by flycatching. Primarily eats insects and small mammals, but also takes some birds, fishes, and frogs.

REFERENCES: Butts 1973, Errington and Bennett 1935, Evans 1982, Heintzelman 1979, Karalus and Eckert 1974, Tate and Tate 1982, Terres 1980, Zarn 1974b.

Spotted Owl

Strix occidentalis



RANGE: Resident from southwestern British Columbia south through western Washington and western Oregon to southern California; also in the mountains of southern Utah, central Colorado, Arizona, New Mexico, and extreme western Texas south into northern Mexico.

STATUS: Rare; habitat is limited due to harvesting of old-growth forests. The Northern Spotted Owl subspecies is federally listed as a threatened species.

HABITAT: Inhabits dense coniferous forests with crown closures of at least 80 percent or mixed woodlands and deeply shaded canyons in coastal and mountainous areas of the West. In California, prefers dense fir or Douglas-fir forests on sheer, heavily wooded cliffsides or in narrow canyons, but also inhabits stream valleys well grown with oaks, sycamores, willows, cottonwoods, and alder tangles. In Southwest, favors forested mountain tablelands and canyons from 5,500 to 9,000 feet with dense aspen clumps and creek fringe maples.

SPECIAL HABITAT REQUIREMENTS: Cavities for nesting and at least 600 acres of dense, old-growth forest or deep, narrow, well-wooded canyons per pair.

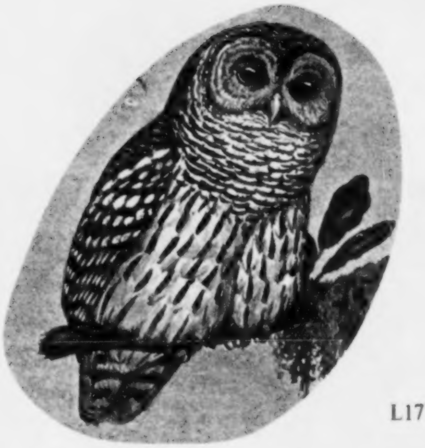
NEST: Generally nests in cool, shaded areas with well-developed understory and near water. Prefers natural cavities in the old-growth trees, especially Douglas-fir or oaks, with broken tops and infested with mistletoe. Also will nest in cliff cavities, cave floors, occasionally abandoned hawk or raven nests, and hollow logs on the ground. Rarely builds its own nest in the crotch of a tall tree.

FOOD: Preys on a wide variety of animals, but mainly takes small mammals; also eats small birds and large insects.

REFERENCES: Heintzelman 1979, Karalus and Eckert 1974, Marshall 1942, Tate and Tate 1982, Zarn 1974c.

Barred Owl

Strix varia



L17"

RANGE: Resident from southern and eastern British Columbia, northern Washington, and extreme northwestern Montana east to central Saskatchewan, and from southern Manitoba and central Ontario to New Brunswick and Nova Scotia, south to central and southern Texas, the Gulf Coast, southern Florida, and northern Mexico. Northernmost populations are partially migratory.

STATUS: Common to uncommon.

HABITAT: Prefers dense woodlands bordering lakes, streams, swamps, marshes, or low meadows. Favors oak woodlands or mixed forests free of a dense understory but also inhabits deciduous, coniferous, and mixed forests. May also inhabit isolated woodlots with numerous mature trees.

SPECIAL HABITAT REQUIREMENTS: Cool, damp lowlands with large cavity trees 20 inches dbh or greater for nesting.

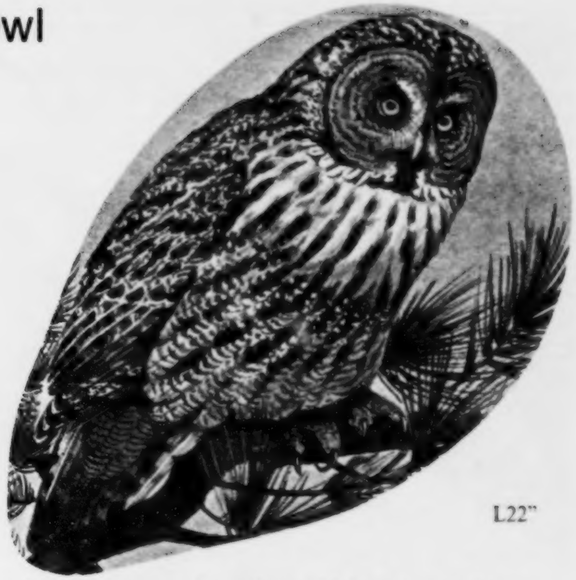
NEST: Typically nests in a large cavity in a dead tree; may nest in abandoned hawk, crow, or squirrel nests if cavities are scarce. Generally chooses tall, old trees with cavities at least 25 feet above the ground, and in the forest interior. May use the same nest site for many years.

FOOD: Hunts for prey over open fields, clearings, and wetlands near woodlands. Feeds on a wide variety of animals, especially mice and other small mammals; also eats birds (from warblers to grouse and other species of owls), fishes, frogs, salamanders, lizards, snakes, crayfish, scorpions, snails, spiders, and large insects.

REFERENCES: DeGraff et al. 1980, Dunstan and Sample 1972, Heintzelman 1979, Johnsgard 1979, Karalus and Eckert 1974, Nicholls and Warner 1972.

Great Gray Owl

Strix nebulosa



RANGE: Breeds from central Alaska and northern Yukon to northern Manitoba and northern Ontario, south locally to central California, northern Idaho, northwestern Wyoming, central Saskatchewan, northern Minnesota, and south-central Ontario. Winters generally through the breeding range, wandering south irregularly to the northern tier of States.

STATUS: Locally common to rare.

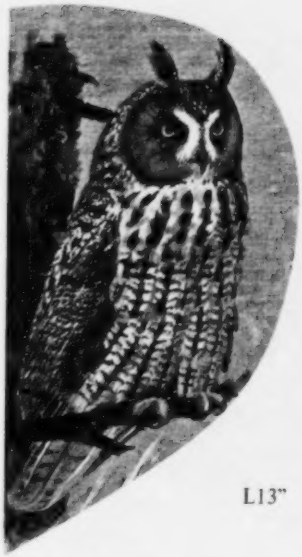
HABITAT: Inhabits dense coniferous forests in Canada, and montane coniferous forests of the western States. Usually prefers pine and fir forests, rarely straying far out onto tundra barrens and muskeg marshes. Nests in mature poplar woodlands, preferably near muskeg areas, well secluded from human activities, and in spruce stands with islands of tamarack. In winter, may inhabit forests, sparse woodland edges bordering open fields, weedy fields with posts or scattered low trees or bushes, or brackish tidal meadows.

SPECIAL HABITAT REQUIREMENTS: Old hawk or crow nests high in trees.

NEST: Does not build its own nest but uses old nests of goshawks, red-tailed hawks, other large hawks, crows, ravens, or artificial nests. Locates nests 10 to 100 feet high in tamarack, balsam poplar, aspen, and spruce trees.

FOOD: Preys primarily on small mammals but also takes some birds up to the size of a grouse.

REFERENCES: Godfrey 1967, Heintzelman 1979, Johnsgard 1979, Karalus and Eckert 1974, Nero 1980.


L13"

Long-eared Owl

Asio otus

RANGE: Breeds from northern Yukon, southwestern Mackenzie, northern Saskatchewan and Nova Scotia, south to northern Baja California, southern Arizona, western and central Texas, Arkansas, northern Ohio, western Virginia, and New England. Winters from southern Canada south to Baja California, Mexico, southern Texas, the Gulf Coast, and Georgia; casually to Florida.

STATUS: Locally common.

HABITAT: Often inhabits coniferous woodlands but also deciduous forests and forested areas near open country. Also will inhabit open or dense woodlands, parks, orchards, woodlots, wooded swamps, streams, and reservoir shorelines, even low-growing scrub if it is in the form of dense, tangled thickets. Occurs up to 10,000 feet.

SPECIAL HABITAT REQUIREMENTS: Dense vegetation for nesting and roosting cover.

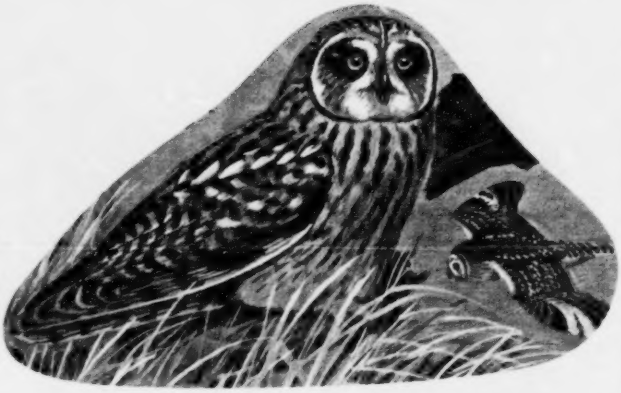
NEST: Most often uses old nests of large birds such as crows, hawks, ravens, herons, or magpies, but will use squirrel nests and natural tree cavities. Usually locates nest 15 to 30 feet above the ground, but may nest on the ground or on ledges. Rarely, will construct own nest.

FOOD: Forages over wooded and open country, preying primarily on mice and other small mammals. Also eats some bats, cottontails, small birds, frogs, small snakes, and insects.

REFERENCES: Armstrong 1958, DeGraff et al. 1980, Heintzelman 1979, Johnsgard 1979, Karalus and Eckert 1974.

Short-eared Owl

Asio flammeus



RANGE: Breeds from northern Alaska and northern Yukon to northern Quebec and Labrador, south to central California, northern Nevada, Utah, Kansas, Missouri, northern Ohio, northern Virginia, and New Jersey. Winters generally in the breeding range from southern Canada south to Mexico.

STATUS: Locally common; population is declining across southern portions of its range.

HABITAT: Primarily inhabits marshland and open grasslands, but also tundra, open fields, forest clearings, sagelands, deserts, pastures, prairies, lower mountain slopes, canyons, arroyos, dunes, meadows, and other open habitats. In winter, prefers open areas with little or no snow.

SPECIAL HABITAT REQUIREMENTS: Extensive open grasslands with an abundance of rodents.

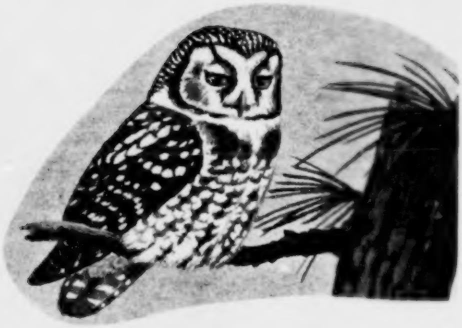
NEST: Nests are sometimes in small loose colonies, placed in slight depressions on the ground, either in exposed situations or in grassy cover among clumps of weeds or grasses. Rarely, will nest in an excavated burrow.

FOOD: Preys primarily on small mammals, especially voles; also eats birds, bats, and large insects.

REFERENCES: Clark 1975, DeGraff et al. 1980, Heintzelman 1979, Johnsgard 1979, Karalus and Eckert 1974, Low and Mansell 1983, Tate and Tate 1982.

Boreal Owl

Aegolius funereus



L10"

RANGE: Breeds from central Alaska and central Yukon to central Quebec and Labrador, south to northern British Columbia and central Alberta, across to northeastern Minnesota, western and central Ontario, southern Quebec and New Brunswick; also to central Colorado and northeastern Wyoming in the Rocky Mountains.

STATUS: Local and uncommon in United States.

HABITAT: Occurs in mixed coniferous-hardwood forests, but prefers extensive growth of stunted spruce in close proximity to open grasslands. Also inhabits dense alder thickets and forest edges.

SPECIAL HABITAT REQUIREMENTS: Abandoned woodpecker holes in dead or live trees for nesting.

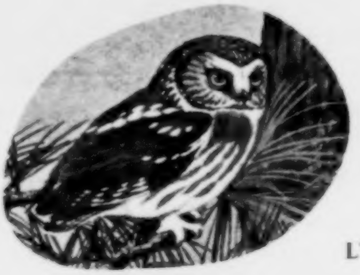
NEST: Prefers abandoned northern flicker or pileated woodpecker cavities in conifers, but will also nest in woodpecker holes in deciduous trees. Usually locates nest 10 to 25 feet above the ground. Sometimes nests in natural cavities and rarely in abandoned bird nests.

FOOD: Preys primarily on small mammals such as lemmings, voles, and mice. Also eats insects, bats, some frogs, salamanders, small snakes and lizards, and during the nesting season, a few birds.

REFERENCES: Heintzelman 1979, Karalus and Eckert 1974.

Northern Saw-whet Owl

Aegolius acadicus
(formerly Saw-whet Owl)



L7"

RANGE: Breeds from southern Alaska, central British Columbia, and central Alberta to southern Quebec and northern New Brunswick, south to southern California, central Mexico, extreme western Texas, central Missouri, southern Wisconsin, central Ohio, West Virginia, and New York; also in the mountains of eastern Tennessee and western North Carolina. Winters generally throughout the breeding range, south irregularly to southern Arizona, the Gulf Coast, and central Florida.

STATUS: Uncommon.

HABITAT: Favors dense woods, especially swampy areas of coniferous or hardwood forests. Also inhabits tamarack bogs, alder thickets, cedar groves, woodlots, and roadside shade trees; may take up temporary residence in or around a barn. Prefers cedar groves and vine clusters for roosting.

SPECIAL HABITAT REQUIREMENTS: Tree cavities large enough for nesting and roosting.

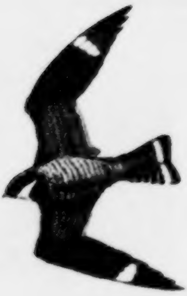
NEST: Usually nests in abandoned nest holes of northern flickers, hairy woodpeckers, or other woodpeckers but will use natural cavities of suitable size. Usually nests 20 to 40 (range 14 to 60) feet above the ground. Occasionally uses nest boxes with a layer of straw or sawdust.

FOOD: Mostly eats small mammals; also preys on small birds, some insects, and frogs.

REFERENCES: DeGraff et al. 1980, Heintzelman 1979, Johnsgard 1979, Karalus and Eckert 1974.

Lesser Nighthawk

Chordeiles acutipennis



L 8" W 21"

RANGE: Breeds from central interior California, southern Nevada, extreme southwestern Utah, central Arizona, central New Mexico, and central and southeastern Texas south to South America. Winters from Mexico south to South America.

STATUS: Common.

HABITAT: Inhabits bare or somewhat brushy country in low deserts of the Southwest. Occurs around dry fields, dry washes and riverbeds, sandy flats, and broad, rocky, sparsely vegetated valleys.

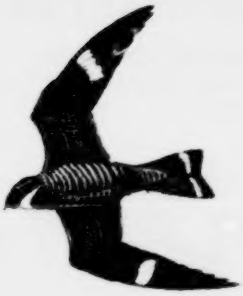
NEST: Generally lays eggs on bare ground in open sandy or gravelly areas but also in brushy areas, lowlands, hills, canyons, and dry rocky slopes and mesas, or on flat gravel and asphalt roofs.

FOOD: Favors areas with concentrations of flying insects, near trees and brush along springs and streams; catches a variety of insects in flight, including winged ants, mosquitoes, June bugs, beetles, moths, and grasshoppers.

REFERENCES: Bent 1940b, Harrison 1979, Oberholser 1974a, Terres 1980.

Common Nighthawk

Chordeiles minor



L 9" W 23"

RANGE: Breeds from southern Yukon and southern Mackenzie to central Quebec and southern Labrador, south to southern California, southern Nevada, southern Arizona, Texas, the Gulf Coast, Florida, Mexico, and Central America. Winters in South America.

STATUS: Common; population is declining in some regions.

HABITAT: Inhabits varied habitats throughout most of North America. Prefers open habitats such as grasslands, sparse woods, or towns and cities. Also inhabits areas with plowed fields, and gravel beaches, as well as railroad right-of-ways and barren areas with rocky soils.

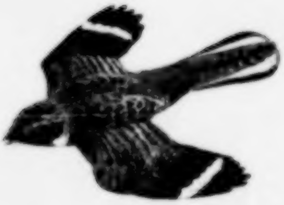
NEST: Lays eggs on flat substrates such as gravelly ground, burned-over areas, gravel and asphalt rooftops, dry barren plains, bare rock, and partially vegetated soil, but always in the open.

FOOD: Mainly crepuscular and nocturnal; sweeps flying insects, from tiny gnats to large moths, out of the air. Eats large quantities of mosquitoes and flying ants as well as beetles, plant lice, grasshoppers, locusts, horseflies, and other insects.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Tate and Tate 1982, Terres 1980.

Common Pauraque

Nyctidromus albicollis
(formerly Pauraque)



L 11"

RANGE: Resident in southern Texas south to South America.

STATUS: Common.

HABITAT: During the breeding season inhabits brushy woods, open chaparral, rivers that are lined by trees and brush. Prefers patches of mesquite and ebony blackbead woodlands. In winter, prefers dense bottomland thickets.

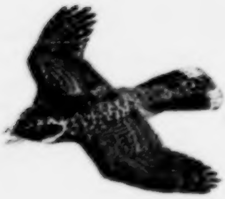
NEST: Lays eggs on the ground in open woodlands with a leaf-covered floor, in brush, or on the edges of fields. Does not build a nest, but in more open areas may conceal eggs by a bush.

FOOD: Usually perches on ground and flies up to snatch airborne insects; sometimes perches on low dead limbs or on top of a bush to hunt for insects. Eats low-flying moths, beetles, locusts, bugs, bees, wasps, butterflies, and other insects.

REFERENCES: Bent 1940a, Harrison 1979, Oberholser 1974a.

Common Poorwill

Phalaenoptilus nuttallii
(formerly Poor-will)



L7"

RANGE: Breeds from southern interior British Columbia, Montana, southeastern Alberta, and southwestern South Dakota south to Baja California, central Mexico, and central Texas and east to eastern Kansas. Winters in southern portion of breeding range.

STATUS: Common.

HABITAT: Inhabits a variety of arid and semiarid habitats in the West, from lowlands up to 8,000 to 10,000 feet on mountain slopes. Inhabits sparse desert brushland, open prairies, open pinyon-juniper woodlands, mixed chaparral-grassland, brushy rocky canyons, mountain scrub, and pine-oak woodlands. Seems to prefer rocky habitats with scrubby cover or xeric woodlands.

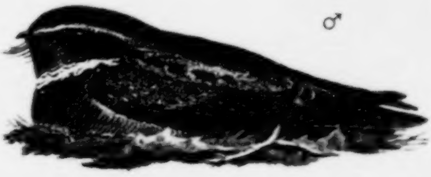
NEST: Lays eggs on gravelly ground or on a flat rock, or in a slight hollow scraped in the ground. Often lays eggs so that they are partially shaded by a bush, weeds, or a tuft of grass.

FOOD: Catches insects such as moths, beetles, chinch bugs, locusts, and grasshoppers by leaping from the ground or a perch, or by picking them up from the ground.

REFERENCES: Bent 1940a, Bevier in Farrand 1983b, Oberholser 1974a, Terres 1980.

Chuck-will's-widow

Caprimulgus carolinensis



L 11"

RANGE: Breeds from eastern Kansas, southern Iowa, and central Illinois to New Jersey and southern New York, south to south-central and southeastern Texas, the Gulf Coast, and southern Florida. Winters from southeastern Texas, Louisiana, and northern Florida to South America.

STATUS: Locally common.

HABITAT: Prefers mixed oak and pine forests, but also inhabits evergreen oak groves, forest edges, and woodlands along river courses. During migration and in winter, frequents open woodland and scrub and palmetto thickets.

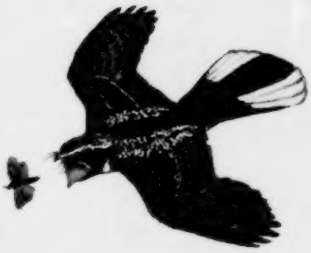
NEST: Lays eggs on the ground on dead leaves, usually at the edges of forests, near roads or other clearings, usually with little or no undergrowth around the eggs.

FOOD: Forages at night by flying along edges of woods and fields, catching night-flying moths, beetles, and other insects. Rarely captures small birds such as hummingbirds, warblers, and sparrows and swallows them whole.

REFERENCES: Bent 1940a, Forbush and May 1955, Johnsgard 1979, Sykes in Farrand 1983b, Terres 1980.

Whip-poor-will

Caprimulgus vociferus



L 9"

RANGE: Breeds from north-central Saskatchewan and southern Manitoba to southern Quebec and Nova Scotia, south to eastern Kansas, northeastern Texas, and northern Louisiana across to central Georgia; and from southern California, southern Nevada, central Arizona, and extreme western Texas south to Mexico. Winters from southern Texas, the Gulf Coast, and east-central South Carolina south to Central America.

STATUS: Common; population is declining slightly throughout the breeding range.

HABITAT: In the East, prefers open hardwood or mixed woodlands of pine, oak, and beech, particularly younger stands in fairly dry habitats; also favors stands with scattered clearings. In the Southwest, frequents densely wooded slopes of oak and pine in canyons and mountains.

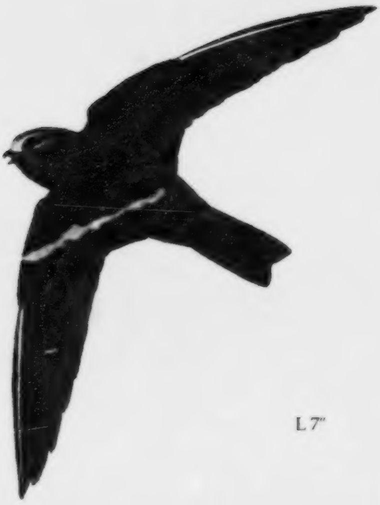
NEST: Lays eggs on dead leaves on well-drained ground, usually in areas of partial shade where there is no undergrowth. Often nests among trees at the edge of a clearing or path, sometimes laying eggs in the shade of a small bush.

FOOD: Feeds nocturnally, often pursuing insects attracted to lights near buildings in rural areas. Feeds in flight on moths, beetles, mosquitoes, ants, grasshoppers, June bugs, gnats, and other insects.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Raynor 1941, Tate and Tate 1982, Terres 1980.

Black Swift

Cypseloides niger


L 7"

RANGE: Breeds locally from southeastern Alaska, northwestern and central British Columbia, and southwestern Alberta south through the Pacific states and Mexico to Central America; also in northwestern Montana, Colorado, and central Utah. Winters in Mexico and Central America.

STATUS: Rare or uncommon.

HABITAT: Found in areas with rocky cliffs available for nesting, varying from ocean cliffs to mountain ledges, at elevations from sea level to 11,000 feet.

SPECIAL HABITAT REQUIREMENTS: Crevices or ledges on rocky cliffs for nesting, preferably near or behind a waterfall.

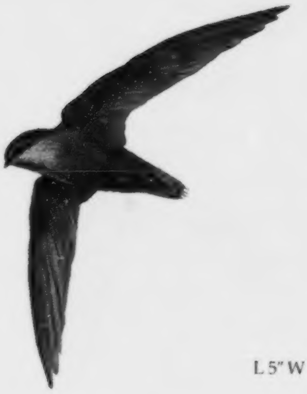
NEST: Nests in small colonies, from 5 to 15 pairs, on a sea cliff, ledge, or cave, or in a crevice or ledge on a sheer, high, moist cliff face near or behind a waterfall, or over a pool.

FOOD: Feeds exclusively on insects captured, usually high in the air, during long-distance foraging flights over all types of terrain. It eats various flies, midges, beetles, termites, flying ants, aphids, bees, wasps, and some spiders.

REFERENCES: Bailey and Niedrach 1965, Lack 1956, Terres 1980, Verner and Boss 1980.

Chimney Swift

Chaetura pelagica



L 5" W 12½"

RANGE: Breeds east of the Rocky Mountains from east-central Saskatchewan and southern Manitoba to southern Quebec and New Brunswick, south to eastern New Mexico, south-central and southern Texas, the Gulf Coast and south-central Florida. Winters in South America.

STATUS: Common.

HABITAT: Not confined to any single habitat, as breeding range is largely dependent on suitable nesting sites. Formerly found in habitats with mature, hollow trees, now occurs primarily in the vicinity of buildings in towns, cities, and around farms.

SPECIAL HABITAT REQUIREMENTS: Hollow trees or structures such as chimneys, silos, cisterns, wells, rafters, and airshafts for nest sites.

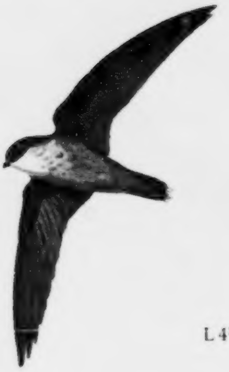
NEST: Originally adapted to nesting in caves and tree hollows, now mostly nests in man-made structures. Prefers dark areas and sheltered sites high above the ground. Constructs nest of twigs glued together with saliva; attaches nest to a vertical wall anywhere from near the top of a structure to more than 20 feet below the top.

FOOD: Forages almost entirely on flying insects including beetles, flies, ants, termites, and bugs but will sometimes take small caterpillars hanging from tree branches or leaves.

REFERENCES: Bailey and Niedrach 1965, DeGraff et al. 1980, Fischer 1958, Forbush and May 1955, Johnsgard 1979, Terres 1980.

Vaux's Swift

Chaetura vauxi



L 4½"

RANGE: Breeds from southeastern Alaska, northwestern and southern British Columbia, northern Idaho, and western Montana south, chiefly from the Cascades and Sierra Nevada westward, to central California south to northern Mexico. Winters in Central America.

STATUS: Uncommon.

HABITAT: Inhabits forested regions with large trees. In Montana, it occurs in mixed forests of Douglas-fir, ponderosa pine, lowland fir, western larch, yellow birch, aspen, and cottonwoods; in California, inhabits ponderosa pine, mixed conifer, and Jeffrey pine forests, and possibly black oak woodlands. Also inhabits river valleys in dense Douglas-fir and redwood forests.

SPECIAL HABITAT REQUIREMENTS: Hollow stubs or snags for nesting.

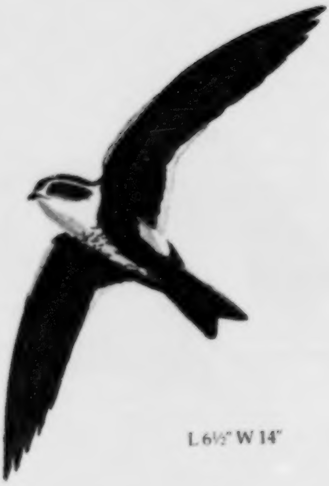
NEST: Nests are usually in a tall, hollow, dead tree, or inside burned-out stumps, generally within 20 inches but up to 6 feet up from the bottom of the cavity. Also nests in chimneys, but is not dependent upon them.

FOOD: Feeds exclusively on flying insects captured in mid-air in forest openings, especially over lakeshores and streams.

REFERENCES: Baldwin and Hunter 1963, Baldwin and Zaczkowski 1963, Bent 1940b, Scott et al. 1977, Terres 1980, Verner and Boss 1980.

White-throated Swift

Aeronutes saxatalis



L 6½" W 14"

RANGE: Breeds from southern British Columbia, Idaho, Montana, and southwestern South Dakota south through the Pacific and southwestern States to Baja California, Mexico, and Central America, and east to western Nebraska and western Texas. Winters from central California, central Arizona and, rarely, southern New Mexico south to Central America.

STATUS: Common.

HABITAT: Inhabits areas with steep cliffs and deep canyons at elevations from near sea level to about 13,000 feet. Inhabits primarily mountainous country but also coastal cliffs, rugged foothills, and desert canyons; ranges over adjacent valleys while foraging.

SPECIAL HABITAT REQUIREMENTS: Crevices in cliffs for nesting.

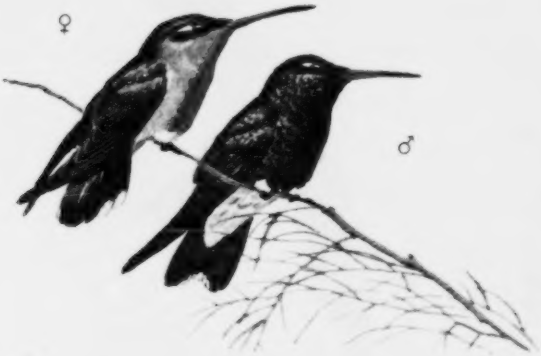
NEST: Places nests in deep cracks and crevices in steep, rocky, often inaccessible cliff faces or canyons, from 10 to 200 feet or more above the base. Sometimes nests in cracks of building walls.

FOOD: Feeds on flying insects captured over any terrain while flying swiftly, usually high above the ground. Eats flies, beetles, bees, wasps, ants, bugs, leafhoppers, and other insects.

REFERENCES: Bailey and Niedrach 1965, Bent 1940b, Terres 1980, Verner and Boss 1980.

Broad-billed Hummingbird

Cynanthus latirostris



L 3¼"

RANGE: Breeds from southeastern Arizona, southwestern New Mexico, and very locally in western Texas south through Mexico. Winters in Mexico, casually north to southern Arizona.

STATUS: Common.

HABITAT: Prefers desert mountain canyons, riparian woodlands, and higher desert washes, especially where sycamores, cottonwoods, willows, and mesquite are present.

SPECIAL HABITAT REQUIREMENTS: Red or red and yellow flowers for nectar.

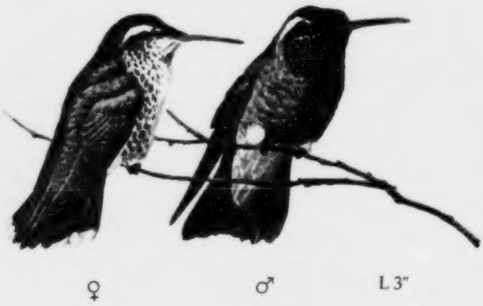
NEST: Places nest on a branch of a small tree, or a stalk of a vine or shrub, usually 4 to 7 feet above the ground.

FOOD: Prefers to feed on nectar from red, or red and yellow flowers such as ocotillo, paintbrushes, and others. Also gleans small insects and spiders from the undersides of branches and leaves.

REFERENCES: Cottam and Knappen 1939, Johnsgard 1983b, Moore 1939, Terres 1980, Terrill in Farrand 1983b.

White-eared Hummingbird

Hylocharis leucotis



RANGE: Resident from Sonora, Chihuahua, Coahuila, Nuevo Leon, and Tamaulipas south through the highlands of Mexico, Guatemala, El Salvador, and Honduras to north-central Nicaragua. Irregularly, in summer, in the mountains of southern Arizona, southwestern New Mexico, and western Texas; northernmost populations are partially migratory.

STATUS: Rare and irregular in United States.

HABITAT: Prefers the undergrowth of oak forests but also occurs in pine woods, dense pine-oak forests, high mountain fir forests, partially open mountain country with scattered trees and shrubs, suburban gardens, and vacant lots with scattered shrubs and flowers. (Little is known about its habits in the United States, and there is no good evidence that it has ever nested in Arizona.)

SPECIAL HABITAT REQUIREMENTS: Flowers, especially blue flowers such as salvia, for nectar.

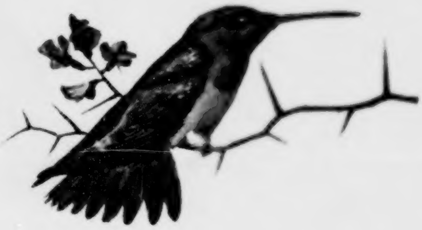
NEST: Nest sites are nearly always in shrubs or fairly low trees.

FOOD: Feeds on flies and other insects found in honeysuckle and other flowers. Is easily attracted to hummingbird feeders.

REFERENCES: Cottam and Knappen 1939, Johnsgard 1983b, Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983b.

Buff-bellied Hummingbird

Amazilia yucatanensis



L 3¼"

RANGE: Resident from southern Texas in the lower Rio Grande Valley south to Honduras. Casual north to central and eastern Texas, and southern Louisiana.

STATUS: Uncommon; once common, but has largely disappeared north of the border, probably as a result of habitat destruction and the spraying of insecticides.

HABITAT: Inhabits semiarid lowlands dominated by woods or scrubby growth, preferring dense thickets, flowering bushes, and tangled vines along the banks of streams and ponds, resacas, and gullies. Also occurs in semiarid coastal scrub in open woods, chaparral thickets, farms and gardens, and in citrus groves.

SPECIAL HABITAT REQUIREMENTS: Flowers for nectar.

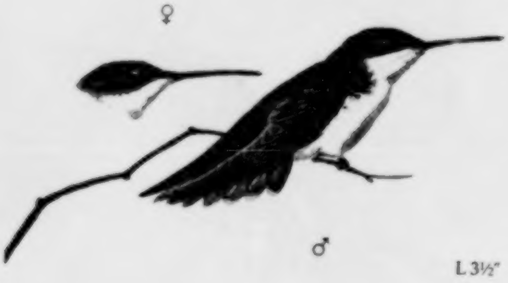
NEST: Places nest 3 to 8 feet above the ground on a small drooping limb or horizontal fork of a twig in a small tree or bush such as anacahuita, ebony blackbead, or hackberry, but sometimes in willow. Often choses a nest site that is near a road, trail, or other clearing.

FOOD: Feeds on the nectar of native flowers and eats insects.

REFERENCES: Johnsgard 1983b, Oberholser 1974a, Terres 1980.

Violet-crowned Hummingbird

Amazilia violiceps



RANGE: Breeds in southern Arizona in the Huachuca and Chiricahua mountains, and in southwestern New Mexico in Guadalupe Canyon south to central Mexico. Casual in southern California. With a few exceptions, withdraws into Mexico in winter.

STATUS: Rare and local; first discovered breeding in the United States in 1959.

HABITAT: Prefers riparian sycamore groves in desert mountain canyons. In the United States, generally associated with streamside plant life in the deserts and foothills of mountains.

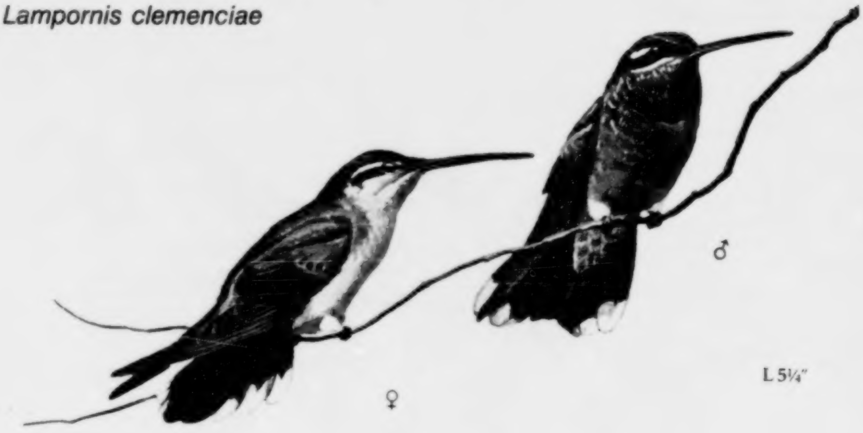
NEST: Builds a nest that is saddled to a horizontal limb in sycamores, 25 to 40 feet above the ground.

FOOD: Probably consumes nectar and insects but no definitive reports have been published.

REFERENCES: Johnsgard 1983b, Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983b, Zimmerman and Levy 1960.

Blue-throated Hummingbird

Lampornis clemenciae



RANGE: Breeds in southeastern Arizona in the Huachuca and Chiricahua Mountains, and from western Texas south to Oaxaca. Casual north to Colorado. Winters in Mexico, but occurs casually at Arizona feeders.

STATUS: Fairly common to uncommon.

HABITAT: Inhabits lush vegetation along wooded streamsides in mountain canyons. In Texas, found among baldcypress, pines, oaks, and bigtooth maples from 4,900 to 7,500 feet in elevation.

SPECIAL HABITAT REQUIREMENTS: Nest sites that are sheltered from rain and sunlight, near an abundance of flowers for feeding, and within a few feet of a stream.

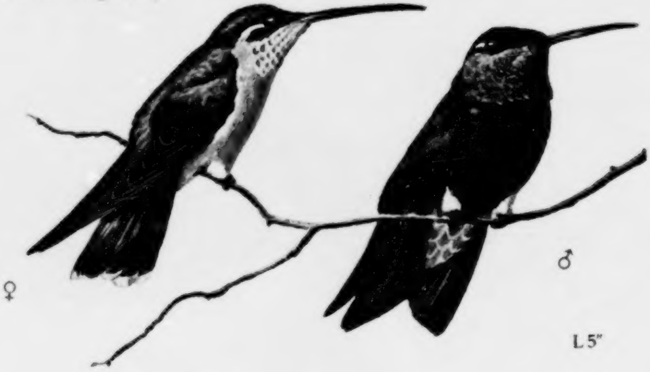
NEST: Builds nest in sites that are completely covered from above, such as in vertical-walled canyons, rock overhangs, on plant stalks, under eaves of buildings, bridges, water towers, and inside buildings. May use the same nest site for several years, adding to the nest each time it is used.

FOOD: Forages on drier canyon slopes to feed on nectar of agave and honeysuckle flowers; also frequents flower gardens. Also eats flies, bugs, small beetles, wasps, spiders, daddy-longlegs, and pollen.

REFERENCES: Cottam and Knappen 1939, Johnsgard 1983b, Oberholser 1974a, Terres 1980, Terrill in Farrand 1983b.

Magnificent Hummingbird

Eugenes fulgens
(formerly Rivoli's Hummingbird)



RANGE: Breeds in western Colorado, and from southeastern Arizona, southwestern New Mexico, and western Texas south to Panama. Winters in Mexico and Central America, though a few remain at Arizona feeders.

STATUS: Rare in Colorado, elsewhere uncommon to common.

HABITAT: Found above 5,000 feet in deciduous woods along streams, and in pine or oak woods on mountain slopes and ridges.

SPECIAL HABITAT REQUIREMENTS: Flowers for nectar.

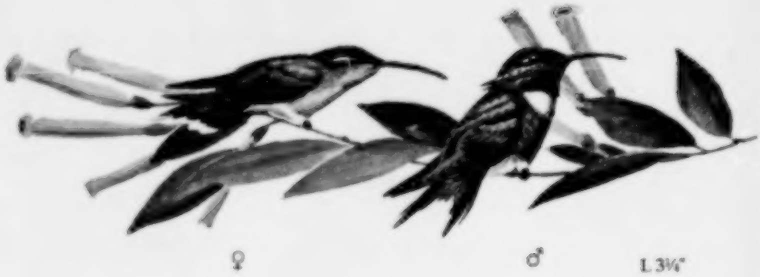
NEST: Builds nest on a horizontal branch from 20 to 55 feet above the ground. Uses a variety of trees for nesting, including cottonwoods, mountain maples, sycamores, alders, walnuts, pines, and Douglas-fir.

FOOD: Visits flowers for nectar, including those of agave, iris, and bright-red salvia. Also eats leaf bugs, aphids, leafhoppers, parasitic wasps, beetles, flies, moths, and spiders.

REFERENCES: Cottam and Knappen 1939, Johnsgard 1983b, Kaufman in Farrand 1983b, Terres 1980.

Lucifer Hummingbird

Calothorax lucifer



RANGE: Breeds from southern Arizona and the Chisos Mountains of western Texas south to the highlands of Mexico. Winters in Mexico.

STATUS: Rare and local.

HABITAT: Inhabits cactus-covered slopes, dry canyons, arid mesas, and foothills and semi-desert habitats from 4,000 to 7,400 feet, often where century-plant agaves are abundant.

SPECIAL HABITAT REQUIREMENTS: Flowers for nectar, particularly agaves.

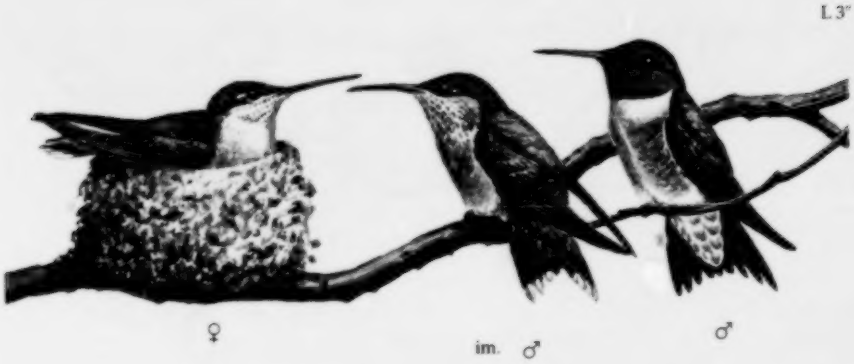
NEST: Places nest in a shrub or on a seed pod of a dead stalk of an agave, 4 to 6 feet above the ground.

FOOD: Forages on Chisos bluebonnet, ocotillo, tree tobacco, and yellow-green blossoms of agave for nectar; probably consumes a high proportion of insects as well.

REFERENCES: Garrett in Farrand 1983b, Johnsgard 1983b, Oberholser 1974a, Terres 1980.

Ruby-throated Hummingbird

Archilochus colubris



RANGE: Breeds from central Alberta and central Saskatchewan to southern Quebec and New Brunswick south, east of the Rocky Mountains, to southern Texas, the Gulf Coast, and Florida. Winters from southern Texas south to Central America; also in southern Florida.

STATUS: Common.

HABITAT: Occurs in a variety of wooded habitats, ranging from rather dense to open coniferous and deciduous woodlands, orchards, and shade trees in yards. Also inhabits mixed woodlands, parks, and gardens, often breeding in woodlands near streams or wooded swamps.

SPECIAL HABITAT REQUIREMENTS: Plants that provide tubular nectar-bearing flowers such as honeysuckle, lantana, gilia, and trumpet vine, especially red flowers.

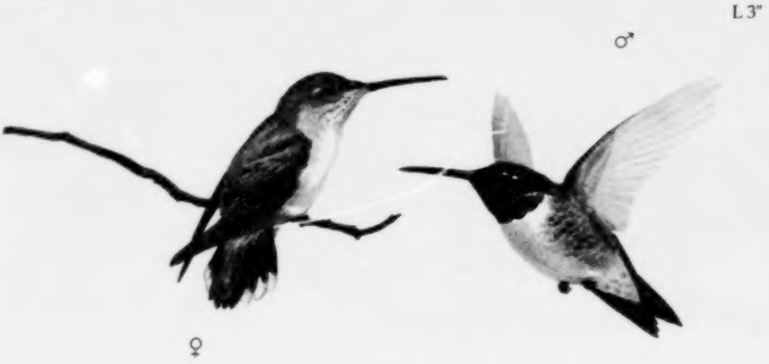
NEST: Places nest 6 to 50 feet, typically 10 to 20 feet, above the ground, on a fairly level or downward slanting twig or branch protected from above by larger branches or a leafy canopy. Often locates nest near or sometimes directly over water, or near a woodland trail. Uses a variety of trees for nesting, but appears to favor hardwoods over conifers, especially those with rough, lichen-covered bark. May use the same nest site year after year.

FOOD: Consumes nectar from flowers, especially red, orange, and pink ones. Also eats small insects, spiders, and tree sap.

REFERENCES: Beal and McAtee 1912, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, 1983b, Terres 1980.

Black-chinned Hummingbird

Archilochus alexandri



RANGE: Breeds from southwestern British Columbia and northwestern Montana south to Baja California, southern Texas, and northern Mexico, and east to western Wyoming, eastern Colorado, eastern New Mexico, and central Texas. Winters in Mexico, casually to southern Texas, southern Louisiana, northwestern Florida, and southern California.

STATUS: Common.

HABITAT: Found most frequently in arid regions, where it inhabits oak and riparian woodlands of canyons and lowlands, small patches of willows along dry washes, chaparral, pine-oak woodlands, orchards, and parks. Perfers sites with a low percentage of canopy cover.

SPECIAL HABITAT REQUIREMENTS: Flowers for nectar.

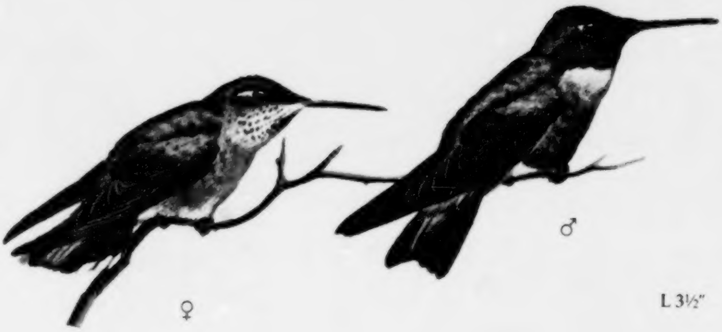
NEST: Usually places nest 4 to 8 feet (but up to 30 feet) above the ground, on a small drooping branch or in a fork of a small tree or shrub, near or overhanging a stream, spring, or dry creek bed. Prefers to nest in oaks, but also nests in alders, cottonwoods, sycamores, laurel, willows, apple, and orange trees in orchards, and in woody vines and tall herbaceous weeds.

FOOD: Feeds on nectar from flowers. Also gleans insects from foliage, and hawks for flying insects.

REFERENCES: Bent 1940b, Harrison 1979, Johnsgard 1983b, Phillips et al. 1964, Terres 1980, Verner and Boss 1980.

Anna's Hummingbird

Calypte anna



RANGE: Breeds in western Washington, western Oregon, California, and southern Arizona. Nonbreeding birds occur regularly north to southern British Columbia and, rarely, east to western Texas. Winters from southwestern Oregon south to Mexico, and east to southern Arizona.

STATUS: Common.

HABITAT: Typically in habitats such as chaparral-covered hillsides, canyons, and mountain slopes and oak or sycamore woodlands in canyon bottoms. Also inhabits open mixed woodlands and chaparral, parks, and gardens from sea level to 5,900 feet, preferring timbered sites with sparse canopy cover.

SPECIAL HABITAT REQUIREMENTS: Flowers for nectar near the nest site, and forest openings.

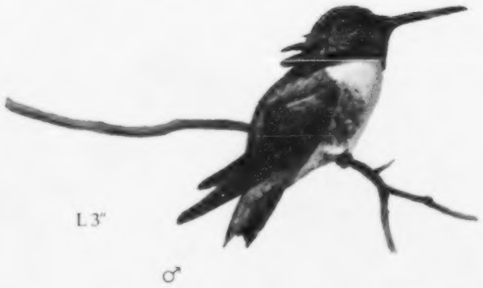
NEST: Places nest on a variety of substrates, including trees such as citrus, eucalyptus, and oaks, as well as chaparral bushes and vines at heights ranging from less than 3 to 30 feet.

FOOD: Obtains nectar from many flowering plants. Also eats flies, bees, wasps, bugs, and spiders gleaned from flowers and foliage and hawked from the air.

REFERENCES: Beal and McAtee 1912, Grinnell and Miller 1944, Johnsgard 1983b, Stiles 1973, Verner and Boss 1980.

Costa's Hummingbird

Calypte costae



RANGE: Breeds from central California, southern Nevada, and southwestern Utah south to southern Arizona and Mexico. Winters from southern California and southern Arizona south to Mexico.

STATUS: Common.

HABITAT: In southwestern deserts, frequents arid washes and hillsides, dry chaparral, and suburban areas where exotic plants have been introduced. In California, inhabits washes, mesas, and hillsides, particularly where sages, ocotillo, yuccas, and cholla cacti are abundant. Relatively independent of water during the breeding season, and thus occupies drier habitats than other hummingbirds.

SPECIAL HABITAT REQUIREMENTS: Flowering plants for nectar.

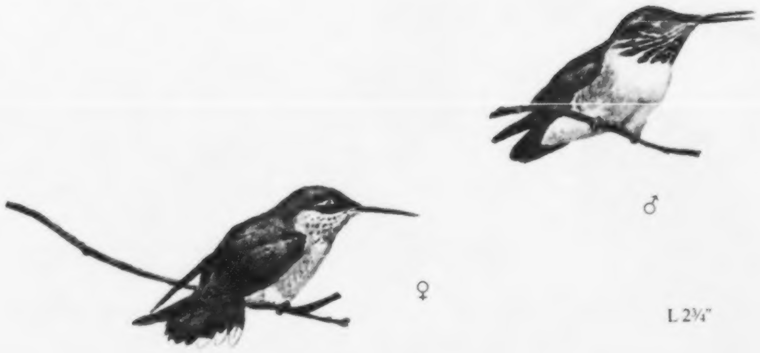
NEST: Builds nests in a variety of sites, usually from 1 to 9 feet above the ground, on twigs or limbs of oaks, alders, hackberry, willow, palm, citrus trees in open orchards, or other trees; in sage, dead yuccas, branching cacti, and paloverde; or on vines clinging to rock faces.

FOOD: Obtains nectar and insects from a variety of flowering desert plants; also eats spiders.

REFERENCES: Garrett in Farrand 1983b, Grinnell and Miller 1944, Johnsgard 1983b, Terres 1980.

Calliope Hummingbird

Stellula calliope



RANGE: Breeds in the mountains from central interior British Columbia and southwestern Alberta south to Baja California, and east to northern Wyoming and western Colorado. Winters in Mexico.

STATUS: Uncommon.

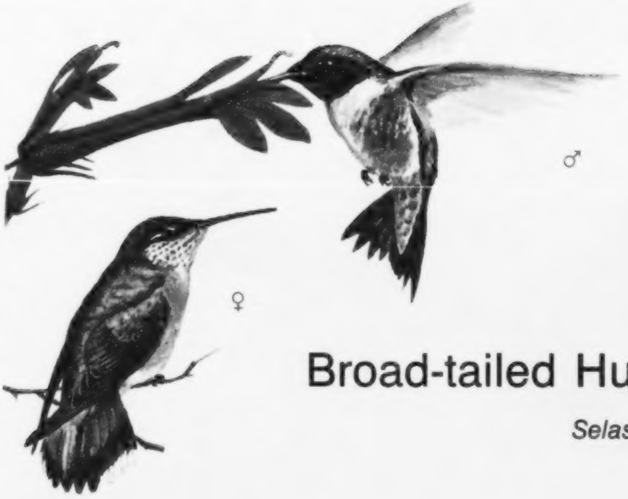
HABITAT: Frequents meadows and canyons; riparian aspen, willow, and alder thickets; and other brushy areas within the coniferous forests of western mountains. Occupies a broad vertical range during the breeding season, from 600 feet in the northern portions of its range to 11,500 feet in the Sierra Nevada. Prefers timbered stands near water with a low to intermediate canopy cover.

SPECIAL HABITAT REQUIREMENTS: Flowers, preferably red, for nectar.

NEST: Typically locates nest below a larger branch or canopy of foliage, usually on a branch that has small knots of dead, black or gray mistletoe or pine cones which nest strongly resembles. Locates nest 2 to 70 feet above ground, frequently in a riparian area. May use the same site in subsequent years.

FOOD: Obtains nectar from a variety of flowers, preferring red ones. Hawks for small flying insects, and eats spiders.

REFERENCES: Bent 1940b, Calder 1971, Garrett in Farrand 1983b, Johnsgard 1983b, Terres 1980, Verner and Boss 1980.



Broad-tailed Hummingbird

Selasphorus platycercus

RANGE: Breeds in the mountains from north-central Idaho, northern Utah, and northern Wyoming south to southeastern California, northern Mexico, and western Texas. Winters in Mexico.

STATUS: Common.

HABITAT: Inhabits meadows and patches of flowers within pine, spruce, fir, and sometimes aspen forests from 4,000 to 11,000 feet. Also inhabits gardens in towns and cities, and sometimes ranges eastward onto the Plains.

SPECIAL HABITAT REQUIREMENTS: Flowers for nectar.

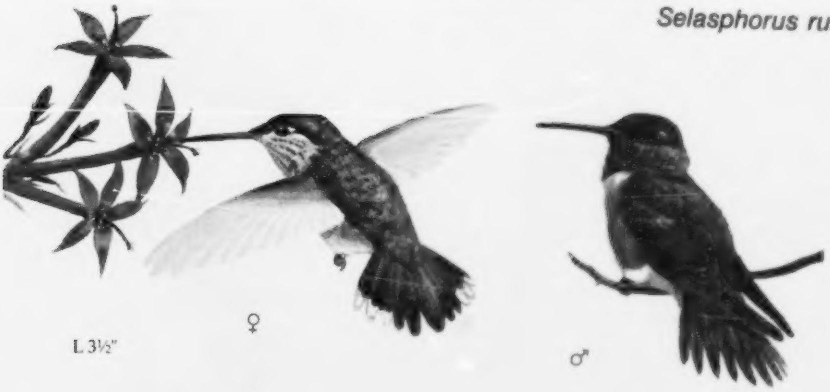
NEST: Nests are saddled on large horizontal limbs or small twigs in shrubs along moist canyon walls, in Douglas-fir, ponderosa pine, subalpine fir, or other conifer, oak, aspen, alder, willow, or cottonwood. Usually locates nest 4 to 15 feet above the ground, and frequently uses the same location for several consecutive summers.

FOOD: Obtains nectar from a variety of flowers. Comes to hummingbird feeders for sugar water and eats small insects and spiders.

REFERENCES: Bailey and Niedrach 1965, Bent 1940b, Johnsgard 1979, 1983b, Phillips et al. 1964, Terres 1980.

Rufous Hummingbird

Selasphorus rufus



RANGE: Breeds from southern Alaska, southern Yukon, and western and southern British Columbia to western Montana south, primarily in the mountains, to northwestern California, eastern Oregon, and central Idaho. Winters in Mexico, in small numbers to southern Texas and the Gulf Coast and, rarely, in coastal southern California.

STATUS: Common.

HABITAT: Occurs in northwestern parks and gardens, in chaparral, and in meadows, forest edges, and riparian thickets of coniferous woodlands. During migration, may be found in high mountain meadows as well as in the Pacific lowlands in open areas where flowers are present.

SPECIAL HABITAT REQUIREMENTS: Flowers (especially red) for nectar.

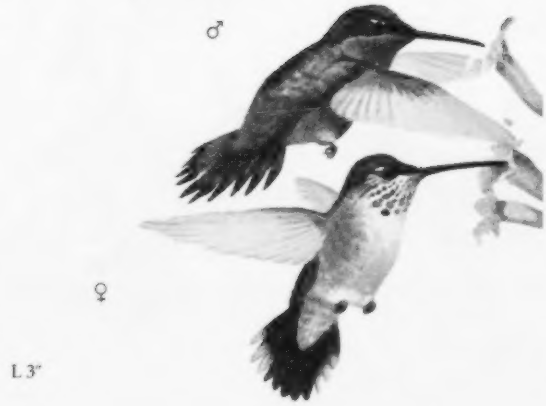
NEST: In northern latitudes, builds nest close to the ground where it is sheltered from wind and cold; otherwise, builds nest 5 to 50 feet above ground. May nest in a variety of sites, sometimes in colonies with up to 20 nests in a small area. Favors the drooping branches of conifers, but also nests in bushes and among vines. Sometimes builds a new nest on top of the previous year's nest.

FOOD: Consumes nectar from flowers, especially red flowers. Also eats insects.

REFERENCES: Bent 1940b, Garrett in Farrand 1983b, Johnsgard 1983b, Terres 1980.

Allen's Hummingbird

Selasphorus sasin



RANGE: Breeds from southwestern Oregon south through coastal California to Santa Barbara County. Resident in southern California in the Channel Islands and on the Palos Verdes Peninsula. Winters in Mexico.

STATUS: Common.

HABITAT: Found within the Pacific coastal fog belt, inhabiting meadows, moist canyon bottoms, humid woody or brushy ravines, brushy edges of coniferous forest, coastal chaparral, and parks.

SPECIAL HABITAT REQUIREMENTS: Shade, preferably patchy, over the nest site, and flowers for nectar.

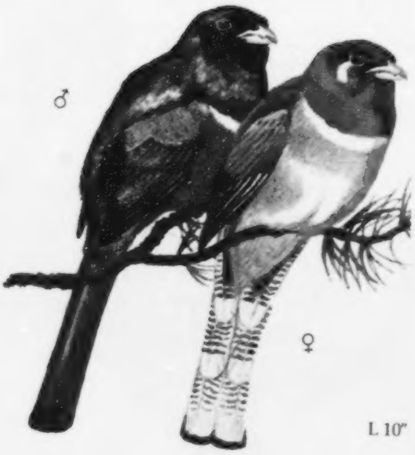
NEST: Usually builds nest on a site with several separate supports such as a dense tangle of vines. Less frequently, attaches nest to the side of a drooping twig or limb from 1 to 90 feet above the ground in trees such as oaks, eucalyptus, and Monterey cypress, or in shrubs in streamside thickets.

FOOD: Obtains nectar from a variety of flowers. Also hawks for small insects.

REFERENCES: Aldrich 1945, Bent 1940b, Harrison 1979, Terres 1980.

Elegant Trogon

Trogon elegans
(formerly Coppery-tailed Trogon)



RANGE: Resident from southern Arizona, primarily in Chiricahua, Huachuca and Atascosa mountains south to Costa Rica. Mostly migratory in northernmost part of range; casual in Arizona, southwestern New Mexico, and southern Texas in winter.

STATUS: Locally fairly common.

HABITAT: Occurs in oak and pine-oak forests in mountain canyons, and in sycamore, walnut, and cottonwood groves along canyon streams.

SPECIAL HABITAT REQUIREMENTS: Natural cavities in trees or large, deserted woodpecker holes.

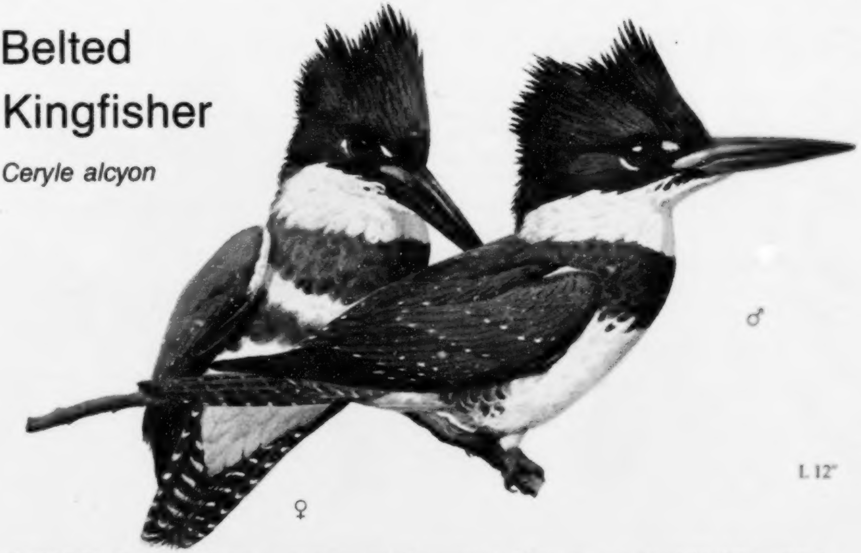
NEST: Builds nest inside cavities of large streamside trees such as sycamores or cottonwoods, 12 to 40 feet above the ground.

FOOD: Primarily eats insects and some fruits.

REFERENCES: Bent 1940a, Cottam and Knappen 1939, Oberholser 1974a, Terres 1980, Terrill in Farrand 1983b.

Belted Kingfisher

Ceryle alcyon



RANGE: Breeds from western and central Alaska, central Yukon, and western and south-central Mackenzie to central Quebec and east-central Labrador south to southern California, southern Texas, the Gulf Coast, and central Florida. Winters from south-coastal and southeastern Alaska, central and southern British Columbia, and western Montana across to Nebraska, the southern Great Lakes and New England south to South America.

STATUS: Common.

HABITAT: Occurs in the vicinity of ponds, lakes, rivers, and streams, even rocky seacoasts near areas of exposed vertical ground such as bluffs, road cuts, gravel pits, or sandbanks. Prefers small, clear bodies of water to large lakes. In winter, frequents ice-free waters that allow access to food.

SPECIAL HABITAT REQUIREMENTS: Nests preferably within 1 mile of water with low turbidity supporting adequate aquatic animal populations, and perches near water to sight prey.

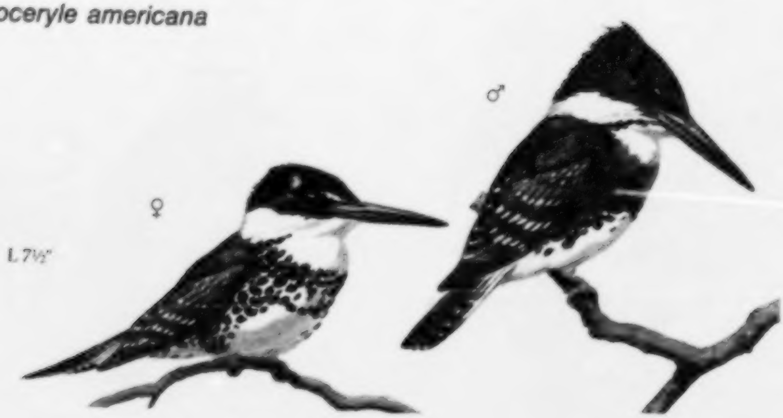
NEST: Typically excavates a nest burrow 3 to 6 feet, up to 15 feet, deep in a bank with sandy, gravelly, or clay soil. Constructs burrow at least 5 feet above level ground or water, and usually within 3 feet of the top of a bank. Occasionally locates burrow far from water, and at times may have to forage up to 5 miles from the nest site. Builds a nest cavity that is an enlarged area at the end of the burrow, often lined with disgorged food pellets.

FOOD: Feeds primarily on fish averaging 3 to 4 inches, caught by diving into water. Forages from a perch or while hovering over water. Also may eat crayfish, mollusks, frogs, tadpoles, lizards, newts, mice, large insects, and occasionally fleshy fruits.

REFERENCES: Cornwall 1963, DeGraff et al. 1980, Johnsgard 1979, Terres 1980, White 1953.

Green Kingfisher

Chloroceryle americana



RANGE: Resident in south-central and southern Texas, occurring up the Rio Grande at least as far as Del Rio, north onto Edwards Plateau, and south through Mexico to South America.

STATUS: Fairly common.

HABITAT: Prefers small, shaded, clear streams and quiet backwaters, but also found around larger bodies of water with dense, low vegetation along the banks.

SPECIAL HABITAT REQUIREMENTS: High banks along clear streams with an abundant supply of small fishes.

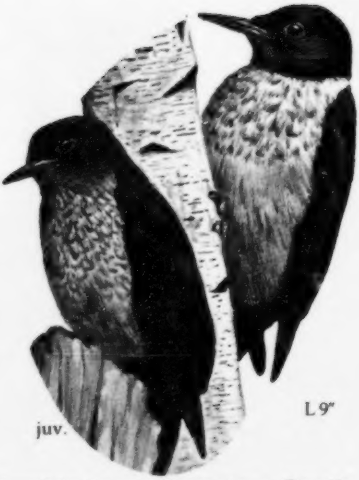
NEST: Digs burrow 2 to 3 feet deep near the top of a high bank over water with a small entrance, about 2 to 3 inches in diameter, usually well concealed by trailing plants and vines or dead vegetation draping the top of the bank.

FOOD: Sights small fishes from a low perch of overhanging branches, roots, or rocks, often just inches above water; plunges into the water from the perch to catch the fishes, rarely hovering.

REFERENCES: Bent 1940a, Kaufman in Farrand 1983b, Oberholser 1974a, Terres 1980.

Lewis' Woodpecker

Melanerpes lewis



RANGE: Breeds from southern British Columbia to southwestern South Dakota and northwestern Nebraska south to south-central California, central Arizona, southern New Mexico, and eastern Colorado. Winters from northern Oregon, southern Idaho, central Colorado, and south-central Nebraska south irregularly to northern Baja California, northern Mexico, southern New Mexico, and west Texas.

STATUS: Population has been declining; has been placed on the blue list.

HABITAT: Inhabits open country with scattered trees rather than dense forests; open or parklike ponderosa pine forests are probably the major breeding habitat. Is attracted to burned-over stands of Douglas-fir, mixed conifer, pinyon-juniper, riparian, and oak woodlands but is also found in fringes of pine and juniper tree stands and in deciduous forests, especially riparian cottonwoods. Prefers areas with a good understory of grasses and shrubs to support insect prey populations. Winters over a wide range of habitats, especially where oaks are present.

SPECIAL HABITAT REQUIREMENTS: Dead trees or tall stumps for cavity nests.

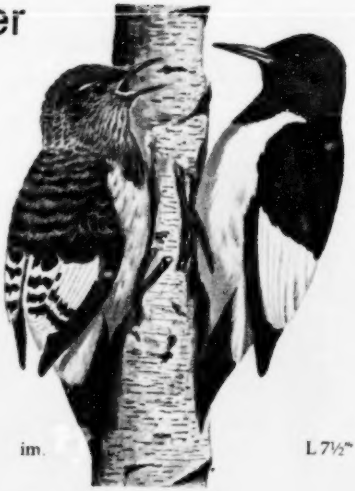
NEST: Generally excavates its own nest cavity in dead trees or tall stumps, but will use natural cavities or old excavated nest sites. Nests about equally in coniferous and deciduous trees, but favors ponderosa pine, cottonwood, and sycamore.

FOOD: Primarily eats insects during spring and summer. Catches flying insects by hawking from perches in dead trees or stumps. Mostly eats fruits and berries during fall. Gathers and stores winter food, mostly acorns, in crevices of dead trees, power poles, or oak bark.

REFERENCES: Beal and McAtee 1912, Bock 1970, Johnsgard 1979, MacRoberts and MacRoberts 1976, Oberholser 1974a, Tate and Tate 1982.

Red-headed Woodpecker

Melanerpes erythrocephalus



RANGE: Breeds from southern Saskatchewan, southern Ontario, southern New Hampshire, and southern New Brunswick south to central Texas, the Gulf Coast and Florida, extending west to central Montana, eastern Wyoming, eastern Colorado, and central New Mexico, rarely to northeastern Utah. Winters regularly through the southern two-thirds of the breeding range, rarely or casually north to the limits of the breeding range.

STATUS: Common, but declining in the Southeast.

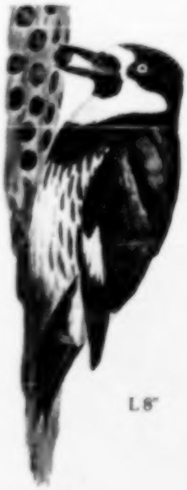
HABITAT: Inhabits relatively open forests or woodlots with low stem density, preferring savannahlike grasslands with scattered trees and forest edges. Attracted to areas with many dead trees which provide nesting and roosting sites, and lush herbaceous ground cover that produces abundant insect populations. Tends to avoid forests with closed canopies, but will move from forest edges to the interior during winter.

SPECIAL HABITAT REQUIREMENTS: Relatively open forests with dead and dying trees for cavities and feeding perches.

NEST: Nests generally in the trunk of a dead tree but sometimes in a dead limb. Tends to select isolated snags for nesting, especially those without bark.

FOOD: In summer, mostly eats insects caught by hawking from perches in dead trees; stores mast, mainly acorns, beechnuts, and corn, under bark, in cracks, knotholes, and tree cavities for winter use.

REFERENCES: Beal 1911, Conner and Adkisson 1977, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, MacRoberts and MacRoberts 1976, Reller 1972, Tate and Tate 1982.



Acorn Woodpecker

Melanerpes formicivorus

RANGE: Resident west of the Cascade and Sierra Nevada Mountains from northwestern Oregon south through California to southern Baja California; and from northern Arizona, northern New Mexico, and western Texas south through the highlands of Central America to Colombia.

STATUS: Common within its range.

HABITAT: Inhabits mixed pine-oak woodlands and adjacent open grasslands along the Pacific Coast and the Southwest.

SPECIAL HABITAT REQUIREMENTS: Oak trees to provide food and large snags that provide sites for nesting, roosting, and food storage.

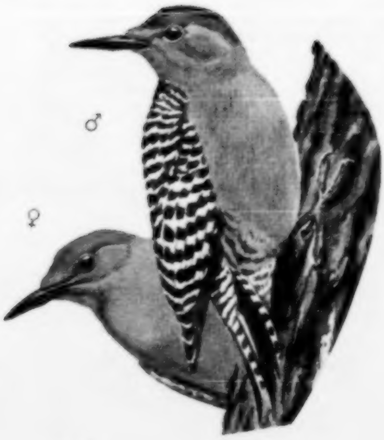
NEST: Excavates cavities in pine snags, living and dead oaks, sycamores, cottonwoods, and willows for nesting and roosting. May use the same cavity for several years. Nests communally and all birds of a community assist in feeding young.

FOOD: Mostly consumes acorns, which are stored in holes drilled in communal trees. Also consumes sap from oaks from midwinter to summer, and hawks insects when available.

REFERENCES: Beal 1911, MacRoberts 1970, MacRoberts and MacRoberts 1976, Overholser 1974a.

Gila Woodpecker

Melanerpes uropygialis



L 8¼"

RANGE: Resident from southeastern California, extreme southern Nevada, central Arizona, and southwestern New Mexico south through Baja California and western Mexico to Jalisco.

STATUS: Locally common.

HABITAT: Inhabits desert mesas in association with creosotebush, mesquite, and saguaro and organ-pipe cactus. Also occurs in riparian areas and in foothill canyons among cottonwoods, willows, and sycamores.

SPECIAL HABITAT REQUIREMENTS: Suitable nest sites in the Sonoran Desert such as cottonwoods, mesquites, and saguaros.

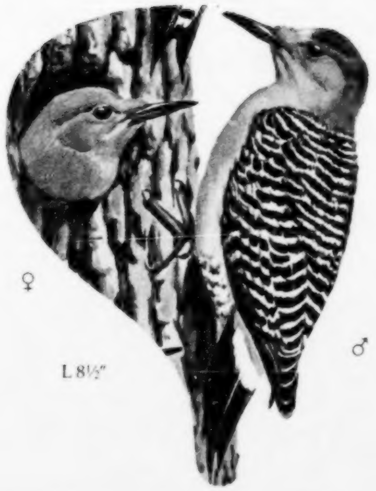
NEST: Excavates holes mainly in saguaro but uses cottonwoods, willows, and mesquites at higher elevations and in riparian habitat.

FOOD: Mainly eats insects; also eats fruits and nuts, and occasionally preys on nestling birds and eggs.

REFERENCES: Bent 1939, Phillips et al. 1964, Terres 1980.

Golden-fronted Woodpecker

Melanerpes aurifrons



RANGE: Resident from southwestern Oklahoma and north-central Texas south through central Texas to Mexico and Central America.

STATUS: Locally abundant; populations may be declining because of mesquite control programs.

HABITAT: Prefers mesquite and riparian woodlands, but also inhabits semiarid brush country, pecan groves, and upland oak stands.

SPECIAL HABITAT REQUIREMENTS: Trees large enough for nest cavity.

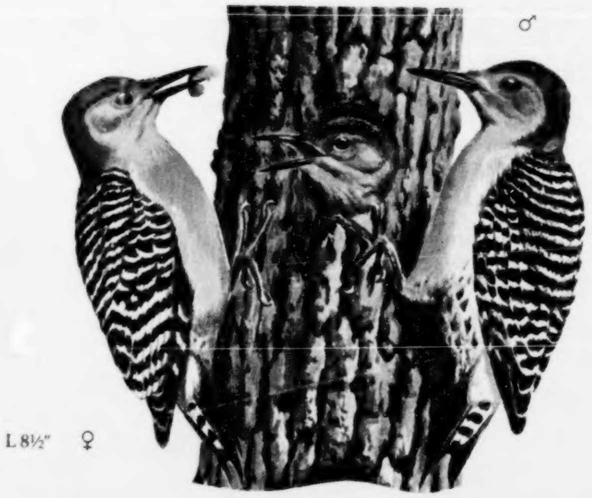
NEST: Excavates nest hole in large living or dead trees, especially in mesquite, oak, and pecan. May also excavate holes in fence posts and telephone or electric poles; occasionally uses bird boxes.

FOOD: Gleans much of its food, which consists of insects, acorns, pecans, wild fruits, corn, and occasionally citrus.

REFERENCES: Bent 1939, Johnsgard 1979, Oberholser 1974a.

Red-bellied Woodpecker

Melanerpes carolinus



RANGE: Resident from southeastern Minnesota, south-central Wisconsin, southern Michigan, southern Ontario, central New York, and Massachusetts south to central Texas, the Gulf Coast, and southern Florida, and west to Iowa, eastern Nebraska, western Kansas, central Oklahoma, and north-central Texas.

STATUS: Common. Range has been expanding westward along the river valleys of the Great Plains.

HABITAT: Inhabits deciduous and coniferous forests of the southeastern United States, especially mature woodlands with dead and broken-topped trees. Also frequents farm woodlots, riparian forests, and orchards.

SPECIAL HABITAT REQUIREMENTS: Mature woodlands with dead trees or trees with large dead limbs for nesting.

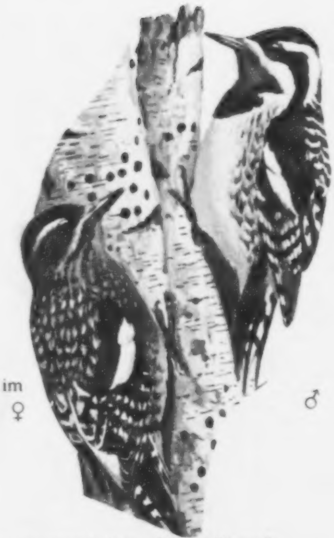
NEST: Nests are excavated in a variety of sites, including trees, stumps, dead limbs, and poles. May nest in buildings or in nest boxes usually less than 40 feet above the ground. Prefers relatively soft deciduous tree species and dead trees or those with decayed stubs.

FOOD: Eats mostly vegetable material including fruit, nuts, poison ivy seeds, pine seeds, and juniper berries, but also feeds on some wood-boring insect larvae found in dead wood.

REFERENCES: Beal 1911, DeGraff et al. 1980, Johnsgard 1979, Reller 1972.

Yellow-bellied Sapsucker

Sphyrapicus varius
(includes Red-naped Sapsucker
Sphyrapicus nuchalis)



L 7¾"

RANGE: Breeds from eastern Alaska east to central Newfoundland, south to northeastern British Columbia, eastern North Dakota, New Hampshire, and locally in the Appalachians south to eastern Tennessee and western North Carolina; and in the Rocky Mountain region from south-central British Columbia to western Montana south, east of the Cascades, to east-central California and western Texas. Winters from Missouri, the Ohio Valley, and New Jersey south through Texas, southeastern United States to central Panama; in the West from southern California, central Arizona, and central New Mexico south to southern Baja California and Jalisco.

STATUS: Common.

HABITAT: Breeds in deciduous and mixed deciduous-coniferous forests in the eastern and northern parts of its range, especially in woodlands with *Populus*. In the Rocky Mountain region, occurs primarily in aspen forests or in coniferous forests where aspen is present. Uses a variety of forests and open woodlands, parks, and orchards in winter.

SPECIAL HABITAT REQUIREMENTS: Dead or live trees with heartrot for cavity nests.

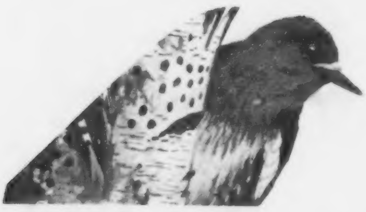
NEST: Excavates cavities in snags or in live trees with rotten heartwood. Prefers aspens but will nest in ponderosa pine, birch, elm, butternut, cottonwood, alder, willow, beech, maple, and fir. May use the same nest tree for several years, but excavates a new cavity each year.

FOOD: Drills rows of holes (sapwells) through the outer bark and consumes cambium and tree sap. Also eats a variety of insects attracted to the sapwells (ants are probably the dominant animal food). Fruits, mast, and *Rhus* seeds are included in the diet.

REFERENCES: Beal 1911, DeGraff et al. 1980, Howell 1952, Johnsgard 1979, Lawrence 1967, Thomas et al. 1979.

Red-breasted Sapsucker

Sphyrapicus ruber
(split from Yellow-bellied Sapsucker)



L 7¼"

RANGE: Breeds from southeastern Alaska and coastal and central interior British Columbia south, west of the Cascades, to northwestern California, and in the Sierra Nevada to east-central California and extreme western Nevada; locally in the mountains of southern California and southern Nevada. Winters throughout the breeding range (except interior British Columbia) south through most of California (west of the deserts) to Baja California.

STATUS: Locally common.

HABITAT: Breeds in coniferous and conifer-aspen associations including the humid coastal lowlands. Also occurs in open woodlands and parks in winter.

SPECIAL HABITAT REQUIREMENTS: Live or dead trees suitable for cavity nests.

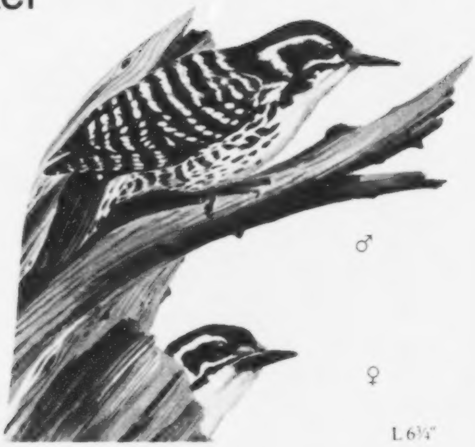
NEST: Apparently excavates a cavity in a variety of tree species, including aspen, alder, cottonwood, fir, willow, and birch.

FOOD: Drills sapwells in a variety of tree species and consumes sap and cambium. Also feeds on a variety of insects, especially ants, and some fruits.

REFERENCES: Beal 1911, Bent 1939.

Nuttall's Woodpecker

Picoides nuttallii



RANGE: Resident from northern California south, west of the deserts and the Sierra divide, to Baja California. Casual or accidental in southern Oregon, southeastern California, and Arizona.

STATUS: Common.

HABITAT: Occurs in oak woodlands, live oak forests, and chaparral, and in canyons with sycamores, alders, cottonwoods, and bay trees growing along streams lined with live oaks.

SPECIAL HABITAT REQUIREMENTS: Cavity nest sites.

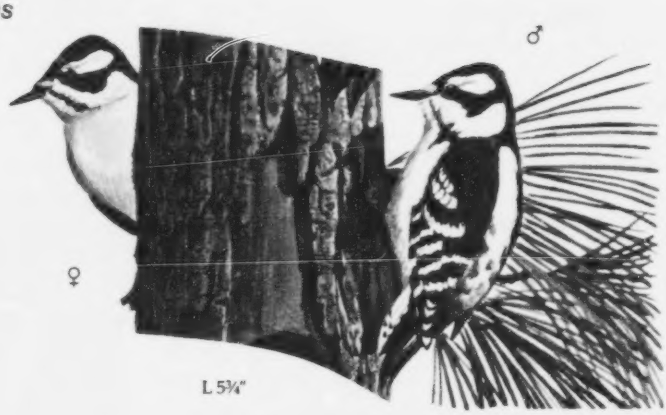
NEST: Excavates cavities in dead limbs and trunks of trees, 3 to 45 feet above ground in oak, willow, sycamore, cottonwood, elder, and alder trees.

FOOD: Consumes a diet consisting of about 80 percent insects (beetles, bugs, caterpillars, and ants) which are gleaned from tree trunks and limb surfaces, or captured on the wing. Also eats wild fruits, poison oak seeds, and occasionally acorns.

REFERENCES: Beal 1911, Miller and Bock 1972, Short 1971, Terres 1980.

Downy Woodpecker

Picoides pubescens



RANGE: Breeds from western and central Alaska, northern Alberta, northern Ontario, and Newfoundland south to southern California, central Arizona, the Gulf Coast, and southern Florida. Winters throughout the breeding range, but are mostly migratory in more northern populations and occurring irregularly southward.

STATUS: Common throughout most of its range.

HABITAT: Inhabits most of the wooded parts of North America, but absent or rare in arid deserts and less common in dense forests. Favors bottomlands but also inhabits open forests and woodlots, orchards, hummocks, farmyards, and urban areas.

SPECIAL HABITAT REQUIREMENTS: Suitable cavity trees.

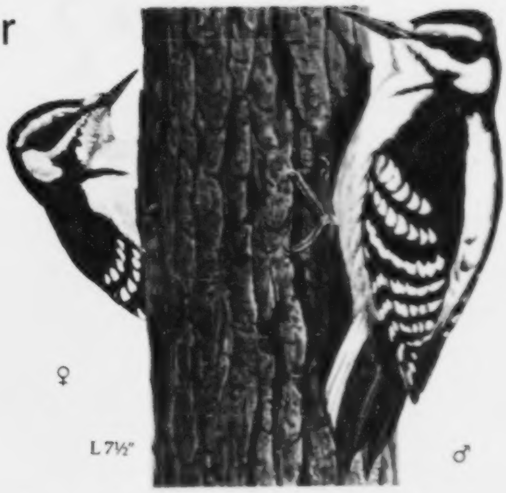
NEST: Prefers to excavate its cavity-nests near the tops of dead trees or dead limbs of live trees in fairly open tree stands. Also nests in live trees, especially if heartrot is present. Generally, excavates new cavities each year; seldom reuses old cavities or cavities of other birds. In the fall, excavates fresh holes for winter roosts.

FOOD: Consumes diet that is 75 percent animal and 25 percent vegetable material (beetles, mostly wood-boring larvae, make up a large portion of the diet). Also eats wild fruits, corn, poison sumac seeds, and mast.

REFERENCES: Beal 1911, Bent 1939, DeGraff et al. 1980, Johnsgard 1979, Kilham 1970, Lawrence 1967, Thomas 1979.

Hairy Woodpecker

Picoides villosus



RANGE: Breeds from western and central Alaska, northern Saskatchewan, and Newfoundland south throughout most of North America to Central America and the Bahamas. Winters generally throughout the breeding range, with the more northern populations partially migratory southward.

STATUS: Stable population throughout most of its range.

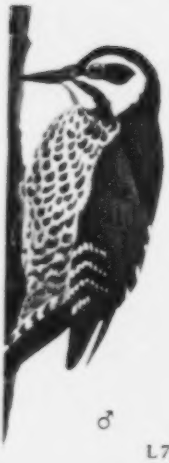
HABITAT: Inhabits nearly all types of forest within its range, preferring bottomlands with large mature trees. Generally more abundant at the edge of woodlands.

SPECIAL HABITAT REQUIREMENTS: Nest trees over 10 inches dbh.

NEST: Excavates cavities in snags or in live trees with decaying heartwood. Usually chooses deciduous trees such as aspens, ashes, elms, or cottonwoods.

FOOD: Consumes a diet that is about 80 percent animal food (wood-boring beetles removed from dead and diseased trees are an important source of food). Also eats other insects, fruits, corn, nuts, and cambium.

REFERENCES: Beal 1911, Bent 1939, DeGraff et al. 1980, Johnsgard 1979, Kilham 1968, Lawrence 1967, Tate and Tate 1982, Thomas et al. 1979.



Strickland's Woodpecker

Picoides stricklandi
(includes Arizona (Brown-backed) Woodpecker)

RANGE: Resident from southeastern Arizona and extreme southwestern New Mexico south to Mexico.

STATUS: Locally common within its limited range.

HABITAT: In the northern part of range, occurs on mountain slopes and is primarily associated with oaks, but sometimes in riparian sycamores, cottonwoods, walnuts, and willows. In the southeastern part of range also associated with pines.

SPECIAL HABITAT REQUIREMENTS: Cavity nest sites.

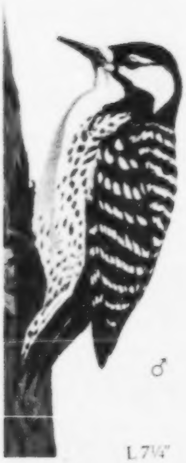
NEST: *Excavates holes in dead branches of live or dead trees, primarily* walnuts, oaks, maples, and sycamores.

FOOD: Feeds mainly on insects and their larvae, and some fruits and nuts.

REFERENCES: Bent 1939, Davis 1965, Terres 1980.

Red-cockaded Woodpecker

Picoides borealis



RANGE: Resident locally from eastern Oklahoma, southern Missouri, northern Arkansas, northern Mississippi, northern Alabama, northern Georgia, southeastern Virginia, and southern Maryland south to eastern Texas, the Gulf Coast, and southern Florida, and north in the Cumberland plateau through eastern Tennessee to Kentucky.

STATUS: Endangered.

HABITAT: Endemic to the yellow pine forests of the southeastern United States, where hardwoods make up less than 35 percent of the tree stand. Generally, inhabits mature forests (at least 60 years old) or younger forests where groups of mature trees are present. It is found in forests dominated by several species of pine, but probably the largest populations are found where longleaf pine is prevalent.

SPECIAL HABITAT REQUIREMENTS: Mature living pines with heartrot for nesting, and extensive pine stands for foraging.

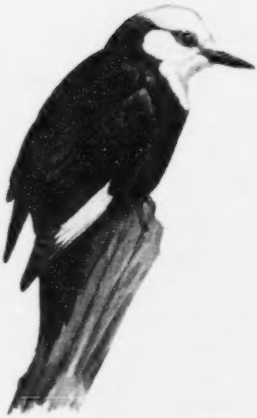
NEST: Excavates nest holes in mature living pines infected with red heartrot. Same pair may reuse a cavity for several years. Breeds cooperatively with auxiliary or helper birds (clan) aiding a mated pair in the rearing of young. Clan size is generally two to four birds at the beginning of the breeding season.

FOOD: Prefers living pines for foraging substrate, especially larger pines. Consumes mostly insects (larvae of wood-boring insects, beetles, grubs, ants, crickets, caterpillars, scales, bark lice, and grasshoppers). Also consumes mast (primarily seeds of conifers), fruit pulp, and poison-ivy and bayberry seeds.

REFERENCES: Baker 1971, Beal 1911, Crosby 1971, Hopkins and Lynn 1971, Jackson 1971, Johnsgard 1979, Lennartz 1984, Ligon 1970, 1971b, Oberholser 1974a, Steirly 1957.

White-headed Woodpecker

Picoides albolarvatus



L 7¾"

RANGE: Resident from southern interior British Columbia, north-central Washington, and northern Idaho south through Oregon, east of the Cascades, to southern California and west-central Nevada. Casual in coastal and desert areas of southern California, but absent from the humid coastal coniferous forest.

STATUS: Local.

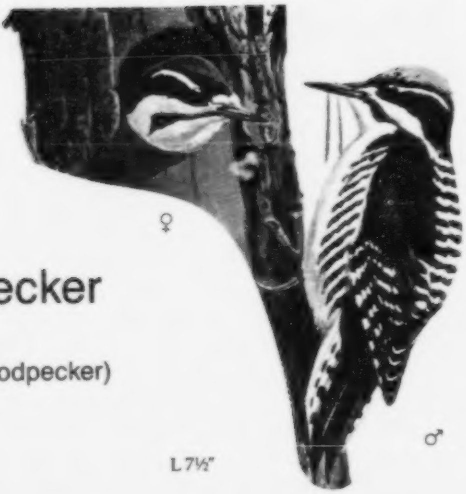
HABITAT: Primarily inhabits open ponderosa pine forests, but also occurs in sugar pine, Jeffrey pine, and red and white fir forests. Prefers forests with large trees and 40 to 70 percent canopy cover.

SPECIAL HABITAT REQUIREMENTS: Dead trees for cavity nests.

NEST: Usually excavates a new nest hole each year; seems to prefer dead pines. Nests in live and dead fir, oak, and aspen, with nest holes usually about 8 feet above the ground.

FOOD: Consumes primarily pine seeds, during winter and early spring (60 percent of total diet) and insects and spiders during summer.

REFERENCES: Bent 1939, Grinnel and Miller 1944, Ligon 1973, Tevis 1953, Verner and Boss 1980.



Three-toed Woodpecker

Picoides tridactylus
(formerly Northern Three-toed Woodpecker)

RANGE: Resident, often locally, from northwestern and central Alaska, northern Manitoba, northern Quebec, and Newfoundland south to western and southern Alaska, central Washington, and southern Oregon, in the Rocky Mountains to eastern Nevada, central Arizona, and south-central New Mexico, and to southwestern and central Alberta, southern Manitoba, northeastern Minnesota, central Ontario, northern New York, northern New England, and southern Quebec.

STATUS: Locally common in western coniferous forests; rare in east.

HABITAT: Primarily inhabits coniferous forests of the West, especially where fires have left large stands of dead trees. Also occasionally inhabits conifer stands in the Northeast.

SPECIAL HABITAT REQUIREMENTS: Dead trees for cavity nests.

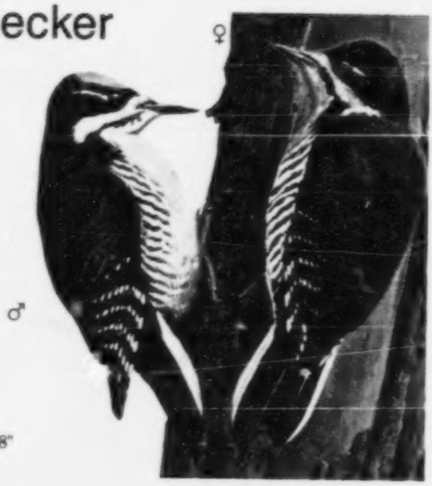
NEST: Excavates nest cavities each year in dead trees or in dead limbs with decayed heartwood in live trees. Usually locates nest holes 5 to 12 feet above ground in pine, aspen, spruce, and cedar.

FOOD: Feeds by probing and drilling for wood-boring larvae of moths and beetles (probably one of the most important birds in combating forest insect pests in the western United States). In Colorado, consumes spruce beetles for 65 percent of its annual diet and 99 percent of its winter diet. Also eats ants, wood-boring larvae, caterpillars, fruits, mast, and cambium.

REFERENCES: Beal and McAtee 1912, Bent 1939, DeGraff et al. 1980, Jackman and Scott 1975, Johnsgard 1979, Koplin 1972, Massey and Wygant 1973, Thomas et al. 1979.

Black-backed Woodpecker

Picoides arcticus
(formerly Black-backed
Three-toed Woodpecker)



RANGE: Resident, often locally, from western and central Alaska, southern Yukon, northern Manitoba, central Labrador, and Newfoundland south to southeastern British Columbia, through the Cascade, Siskiyou, and Warner Mountains and Sierra Nevada of Washington and Oregon to central California and west-central Nevada, through Montana to northwestern Wyoming and southeastern South Dakota, and to southwestern and central Alberta, southeastern Manitoba, northern Minnesota, north-central Michigan, northern New York, and northern New England.

STATUS: Uncommon.

HABITAT: Inhabits dense coniferous forests, especially in burned, swampy, cutover, or beetle-killed forests where dead trees are numerous.

SPECIAL HABITAT REQUIREMENTS: Dead or live trees with dead heartwood for nesting and feeding sites.

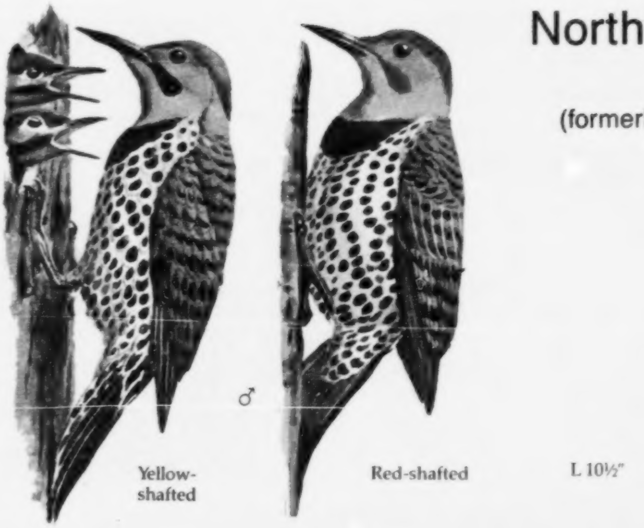
NEST: Usually excavates its cavities in snags or live trees with dead heartwood, especially in areas that have been burned or logged. Mostly nests in spruce, balsam fir, pines, or Douglas-fir, but also in maple, birch, cedar, and utility poles. Locates nest cavity usually less than 15 feet above the ground.

FOOD: Flakes off bark of dead conifers to get at larvae of destructive wood-boring beetles, which make up about 75 percent of its food. Also eats weevils and other beetles, spiders, and ants, along with some wild fruit, mast, and cambium.

REFERENCES: Beal and McAtee 1912, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Thomas et al. 1979.

Northern Flicker

Colaptes auratus
(formerly Common Flicker)



RANGE: Breeds from central Alaska, northern Manitoba, north-central Quebec, and Newfoundland south throughout most of North America and northwestern Mexico. Winters from southern Canada south through the breeding range.

STATUS: Common.

HABITAT: Commonly found near large trees in open woodlands, fields, meadows, and deserts throughout North America. In winter, occasionally seeks shelter in coniferous forests or in swamps.

SPECIAL HABITAT REQUIREMENTS: Cavity nest sites.

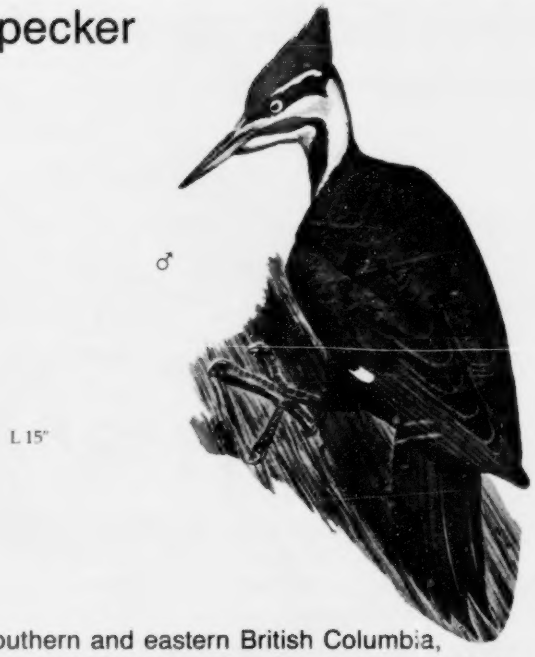
NEST: Prefers to nest near the top of broken-off stubs of dead trees in open country or in sparsely wooded parklike suburban areas. Also nests in and around openings in extensive forested areas. Excavates nests in dead or live trees of many species, including aspen, cottonwood, oak, willow, sycamore, pine, and juniper.

FOOD: Searches for food, much of the time, on the ground. Consumes a diet that is about 60 percent animal food; of this, nearly 75 percent is ants. (Some flicker stomachs have contained over 2,000 ants.) The diet also includes other insects, weed seeds, cultivated grain, and the fruits of shrubs and trees.

REFERENCES: Bailey and Niedrach 1965, Beal 1911, Conner et al. 1975, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Lawrence 1967, Thomas et al. 1979.

Pileated Woodpecker

Dryocopus pileatus



RANGE: Resident from southern and eastern British Columbia, southwestern Mackenzie, central Manitoba, New Brunswick, and Nova Scotia south through Alberta, Washington, south-central Idaho, western Montana, and Oregon to northern California, west to eastern Dakotas, Missouri, and Oklahoma and south to east-central Texas, the Gulf Coast, and southern Florida.

STATUS: Locally common but has become less common in areas where extensive agricultural or logging practices have eliminated large tracts of old-growth forests.

HABITAT: Generally limited to mature coniferous, deciduous, and mixed forests with large, dead trees. Prefers woodlands near water.

SPECIAL HABITAT REQUIREMENTS: Large dead trees for nesting and feeding.

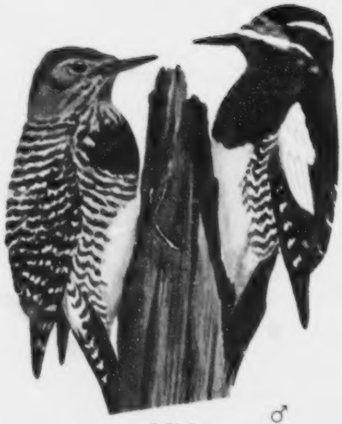
NEST: Usually excavates nest holes in dead tree trunks or dead limbs of living trees. Generally requires trees greater than 15 inches dbh for nest and roost cavities and generally uses ponderosa pine snags greater than 20 inches dbh. Nests in a variety of tree species, including beech, cottonwood, yellow-poplar, birch, oak, hickory, maple, hemlock, pine, ash, elm, basswood, and aspen.

FOOD: Consumes a diet that is about 70 percent insects, with ants, especially carpenter ants and wood-boring beetles, predominating. Also consumes other insects, some wild fruits, mast, and seeds of sumac.

REFERENCES: Beal 1911, Bull and Meslow 1977, Conner et al. 1975, DeGraff et al. 1980, Forbush and May 1955, Hoyt 1957, Johnsgard 1979.

Williamson's Sapsucker

Sphyrapicus thyroideus



RANGE: Breeds from extreme southern interior British Columbia, Idaho, western Montana, and Wyoming south in the mountains to northern and east-central California, central Arizona, and southern New Mexico. Winters generally from the breeding range south to Baja California, and east to western Texas and Mexico.

STATUS: Common.

HABITAT: Prefers mixed conifer-hardwood forests in the Rocky Mountain region but also inhabits the subalpine spruce-fir-lodgepole zone, and ponderosa pine, Douglas-fir, and aspen forests.

SPECIAL HABITAT REQUIREMENTS: Dead or live trees infected with Fomes, a heartrot fungi, for cavity nest sites.

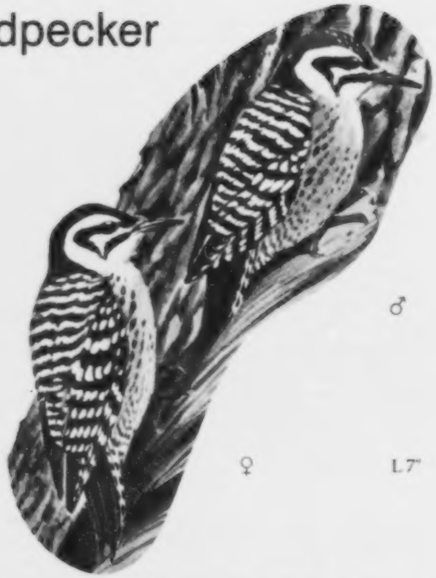
NEST: Chooses different tree species for cavity nests in different regions. In some areas, nests primarily in conifers; in others, prefers aspen, especially those infected with *Fomes.* In Colorado and Arizona, mostly nests in aspen snags or live aspen infected with *Fomes.*

FOOD: Drills rows of pits in the bark of lodgepole pine, hemlock, red and white firs, Jeffrey pine, and aspen and consumes sap and cambium. Eats ants for most of its animal food but also wood-boring larvae, moths of spruce budworm, and other insects.

REFERENCES: Baily and Neidrach 1965, Beal 1911, Bent 1939, Burleigh 1972, Crockett and Hadow 1975, Hubbard 1965, Jackman 1975, Ligon 1961, Oliver 1970, Packard 1945, Rasmussen 1941, Tatschl 1967.

Ladder-backed Woodpecker

Picoides scalaris



RANGE: Resident from southern interior California, irregularly to western Oklahoma south through Texas and Mexico to Central America.

STATUS: Locally common.

HABITAT: Occurs in wooded canyons, cottonwood groves, riparian woodlands in deserts, and dense growth of cholla cactus, creosotebush, catclaw, and other low-growing plants on borders of deserts. Also found in post oak and mesquite woodlands, and on lower slopes of mountains up to 5,500 feet.

SPECIAL HABITAT REQUIREMENTS: Trees or other structures large enough for cavity nests.

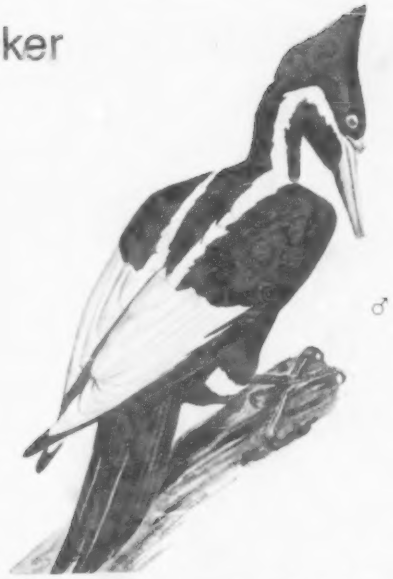
NEST: Excavates nest holes in a variety of trees (mesquite, screw bean, palo verde, hackberry, china tree, willow, cottonwood, walnut, and oak), usually 2 to 30 feet above ground. Sometimes uses saguaro, yucca stalks, telephone poles, and fence posts for nesting.

FOOD: Eats mostly insects, especially larvae of wood-boring beetles, caterpillars, and ants, but also eats fruit of various cacti.

REFERENCES: Bent 1939, Johnsgard 1979, Oberholser 1974a, Phillips et al. 1964.

Ivory-billed Woodpecker

Campephilus principalis



RANGE: Formerly resident from eastern Texas, southeastern Oklahoma, northeastern Arkansas, southeastern Missouri, southern Illinois, southern Indiana, Kentucky, and southeastern North Carolina south to the Gulf Coast, southern Florida, and Cuba.

STATUS: Endangered; may be extinct or nearly so.

HABITAT: Inhabits old-age forests of bottomlands and swamps with dead and dying trees that provide a food source and nest sites. Most birds live in virgin or primitive tree stands, but virgin forests may not be essential as long as there are large numbers of recently dead trees to supply wood-boring grubs and large nesting trees.

SPECIAL HABITAT REQUIREMENTS: Continual supply of dead and dying trees.

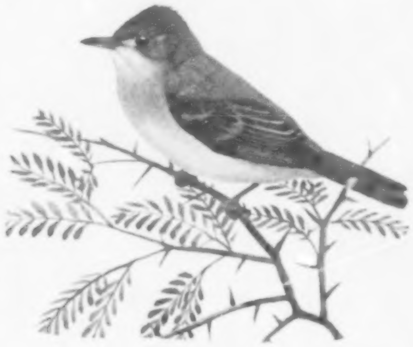
NEST: Excavates a new hole each nesting season, seldom in the same tree, in almost all tree species occurring within its range, and in trunks of living and dead trees.

FOOD: Consumes a diet that is about one-third wood-boring larvae. Most abundant in areas where recently dead and dying trees are numerous because of flooding, fire, insect attacks, or storms; stays as long as abundant wood-boring larvae are present. (Wood-boring larvae begin to decline after trees have been dead 2 or 3 years.) Also eats other insects and fruits.

REFERENCES: Beal 1911, Cottam and Knappen 1939, Dennis 1967, Forbush and May 1955, Greenway 1958, Mackenzie 1977, Oberholser 1938, Pearson 1936, Tanner 1966, USDI Fish and Wildlife Service 1980.

Northern Beardless-Tyrannulet

Camptostoma imberbe
(formerly Beardless Flycatcher)



RANGE: Breeds from southeastern Arizona, extreme southwestern New Mexico in Guadalupe Canyon, and Kenedy County in Texas south to Costa Rica. Winters in Mexico and Central America, casually to southern Arizona.

STATUS: Fairly common to rare.

HABITAT: In Arizona, occurs in cottonwoods, dense mesquite thickets, and in sycamore-live oak-mesquite associations. Along the lower Rio Grande Valley in Texas, inhabits mesquite woodlands, cottonwoods, willows, elms, and great luecaenas.

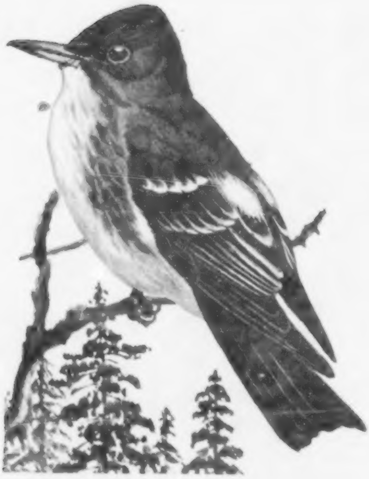
NEST: Typically nests far out on a horizontal limb of a bush or tree up to 50 feet high, but usually near the ground. Usually nests along the edge of a grove, or among scattered trees in flat, sandy lowlands. Locates nest in a clump of mistletoe or sometimes between the bases of stems of palmetto fans.

FOOD: Perches on the top branch of a tree or in lower branches to flycatch and glean scale insects, caterpillars, and ants. Occasionally eats small berries and seeds.

REFERENCES: Bent 1942, Harrison 1979, Oberholser 1974a, Phillips et al. 1964, Terres 1980.

Olive-sided Flycatcher

Contopus borealis



L 6¼"

RANGE: Breeds from western and central Alaska and central Yukon to northern Ontario, south-central Quebec, and southern Labrador south to southern California across to western Texas, and east of the Rocky Mountains, to central Saskatchewan, northern Wisconsin, northeastern Ohio, and Massachusetts; also locally in the Appalachians to western North Carolina. Winters in South America and, casually, in southern California.

STATUS: Local to fairly common.

HABITAT: Inhabits montane and northern coniferous forests up to 10,000 feet in elevation, especially in burned-over areas with tall standing dead trees. Prefers forests of tall spruces, firs, balsams, and pines; groves of eucalyptus and Monterey cypress; taiga; subalpine coniferous forests; mixed woodlands near edges and clearings; and wooded streams and borders of northern bogs and muskegs. Prefers stands with a low percentage of canopy cover.

SPECIAL HABITAT REQUIREMENTS: Tall, exposed perches such as snags or high, conspicuous dead branches.

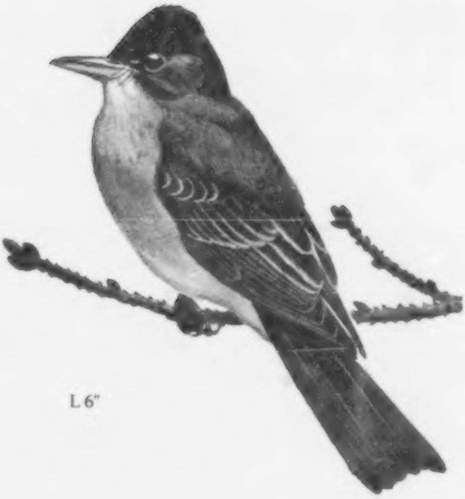
NEST: Usually hides nests in a cluster of needles and twigs on a horizontal branch of a conifer, well away from the trunk, usually between 15 and 50 feet above the ground.

FOOD: Typically perches in tree tops and on high exposed limbs to hawk flying insects.

REFERENCES: Bent 1942, Beal 1912, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Terres 1980.

Greater Pewee

Contopus pertinax
(formerly Coues' Flycatcher)



L 6"

RANGE: Breeds from central Arizona and southwestern New Mexico south to Central America. Winters in Mexico and Central America, casually north to southern Arizona.

STATUS: Fairly common.

HABITAT: Occurs in mountains up to 10,000 feet near the Mexico border, where it inhabits pine and pine-oak forests with an undergrowth of bushes. Also occurs in sycamore groves along mountain canyons.

SPECIAL HABITAT REQUIREMENTS: Tall trees for feeding perches and for nesting.

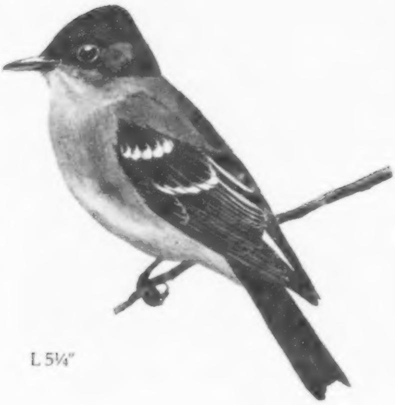
NEST: Locates nest on a horizontal fork 10 to 40 feet above the ground in a pine, sycamore, spruce, maple, oak, or other tall tree. Vigorously defends nest against jays, hawks, squirrels, and snakes.

FOOD: Hawks insects from a perch high up in a tall tree. (There are no detailed reports of its food habits.)

REFERENCES: Bent 1942, Harrison 1979, Phillips et al. 1964, Terres 1980.

Western Wood-Pewee

Contopus sordidulus



L 5¼"

RANGE: Breeds from east-central Alaska, southern Yukon, and southern Mackenzie to northwestern Minnesota, south to Mexico, and east to western South Dakota, western Kansas, and western Texas. Winters in South America.

STATUS: Common.

HABITAT: Occurs in a variety of habitats including open deciduous and coniferous montane forests, pine-oak woodlands, floodplain forests, and wooded canyons. Found from sea level to the tops of coastal ranges, in cultivated stream valleys, in deciduous trees along borders of lakes and streams, in cities and towns, and in open, mature pine forests. It is generally adapted to drier environments than the eastern wood-pewee, and uses areas dominated by conifers.

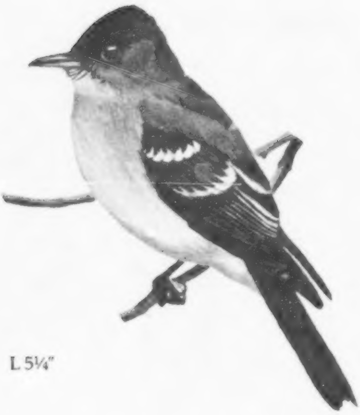
NEST: Locates nest on a horizontal limb or fork, dead or live, in a large variety of trees, usually deciduous, generally 15 to 40 feet above the ground.

FOOD: Catches most of its food by hawking from a perch such as a dead branch. Eats insects, spiders, and a few wild berries.

REFERENCES: Beal 1912, Harrison 1979, Johnsgard 1979, Terres 1980.

Eastern Wood-Pewee

Contopus virens



RANGE: Breeds from southeastern Saskatchewan to southern Quebec and New Brunswick, south to Texas, the Gulf Coast, and central Florida, and west to the eastern Dakotas, central Oklahoma, and south-central Texas. Winters in South America.

STATUS: Common.

HABITAT: Generally associated with deciduous forests; prefers woodlands with a relatively open understory but will use areas with a dense understory if the canopy above is incomplete or sparse. Also inhabits mixed forests, bottomlands, uplands, woodlots, orchards, parks, roadsides, and suburban areas planted to trees. Occurs in floodplain and river-bluff forests at the western edge of its range. Appears to be strongly associated with oaks, and throughout its range probably requires a predominance of hardwoods.

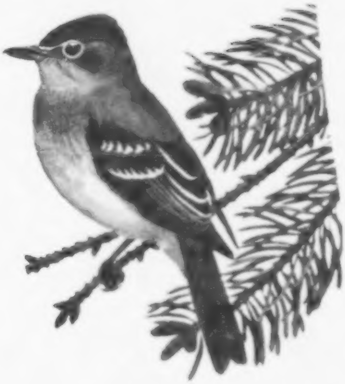
NEST: Locates nest on a horizontal limb usually well out from the trunk, 9 to 65 feet above the ground, often on a dead limb in a living tree. Camouflages nest with spiderwebs and lichens.

FOOD: Prefers to flycatch in a shady spot from mid to low level of the tree canopy. Eats insects, spiders, and millipedes, and also a few berries and seeds.

REFERENCES: Beal 1912, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979.

Yellow-bellied Flycatcher

Empidonax flaviventris



L 4½"

RANGE: Breeds from northern British Columbia and west-central and southern Mackenzie to southern Labrador and Newfoundland south to central Alberta, northern North Dakota, and northern Minnesota, across to southern Ontario, northeastern Pennsylvania, and Nova Scotia. Winters from Mexico to South America.

STATUS: Common.

HABITAT: Prefers predominantly coniferous forests of spruce and fir, frequenting low, swampy thickets bordering ponds and streams, spruce, cedar, tamarack and sphagnum bogs, spruce and alder swamps, wet mossy glades, and cool moist mountainsides.

SPECIAL HABITAT REQUIREMENTS: Low, wet areas within coniferous forest.

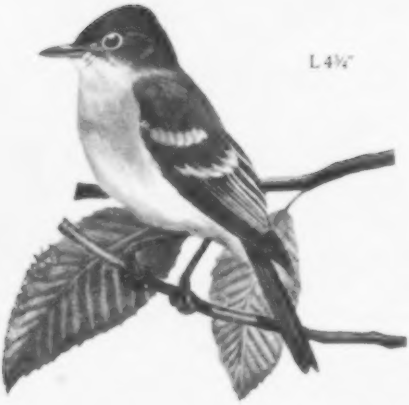
NEST: Nests on or near the ground, sometimes at the base of a tree or in a cavity formed by upturned roots, but more often beside a hummock or mound and well-hidden in sphagnum moss or other vegetation. May also nest in a damp, mossy crevice of rocks, but always in a quiet, concealed site.

FOOD: Perches and feeds close to the ground, mainly on insects, which form 97 percent of the diet; occasionally eats a few berries.

REFERENCES: Beal 1912, Bent 1942, DeGraff et al. 1980, Forbush and May 1955, Terres 1980.

Acadian Flycatcher

Empidonax virescens



RANGE: Breeds from southeastern South Dakota, northern Iowa, and extreme southeastern Minnesota to southern New York, Vermont, and Massachusetts, south to central and southern Texas, the Gulf Coast, and central Florida. Winters in Central and South America.

STATUS: Common

HABITAT: Inhabits the lowest tree canopy and understory layers of shady, humid riverbottom forests and wooded swamps. Prefers damp, lowland forests with an understory and uplands with wooded ravines near streams. Favors beech forests in the Northeast.

SPECIAL HABITAT REQUIREMENTS: Mature, extensive deciduous forests with tall trees, a closed canopy, and open spaces in understory for feeding.

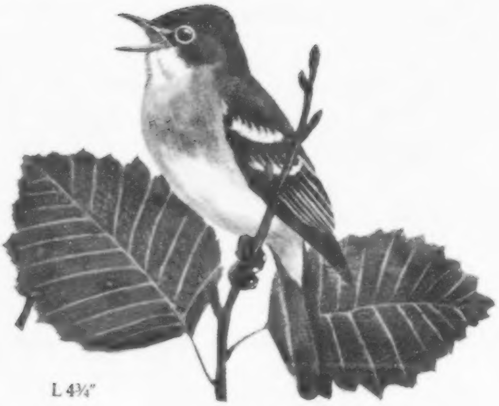
NEST: Nests on a fork of a horizontal branch well away from the main trunk, usually 10 to 20 feet above the ground, often along a stream and sometimes over water. Prefers open space below the nest to approach the nest easily. Favors lower branches of beech, dogwood, and witch-hazel, but also nests in oak, hickory, maple, basswood, and cherry. Occasionally is parasitized by brown-headed cowbirds.

FOOD: Eats mostly insects; also eats some spiders and millipedes, and occasionally a few seeds and berries.

REFERENCES: Beal 1912, Bent 1942, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Mumford 1964.

Alder Flycatcher

Empidonax alnorum


WILLOW
AND ALDER
FLYCATCHERS

RANGE: Breeds from central Alaska and central Yukon to central and eastern Quebec, southern Labrador and southern Newfoundland, south to south-central British Columbia and southern Alberta, across to south-central Minnesota, eastern Pennsylvania, and Connecticut; also in the Appalachians south to western North Carolina. Winters in South America.

STATUS: Common.

HABITAT: Typically inhabits northern alder swamps, where it occupies a variety of habitats, including thickets of aspen parkland. Usually found near water in dense, low, damp thickets of alders, willows, sumacs, viburnum, elderberries, and red-osier dogwood bordering bogs, swamps, marshes, and along the banks of small streams and shores of ponds.

SPECIAL HABITAT REQUIREMENTS: Forest openings and edges with dense, low shrubs.

NEST: Nests in low trees or shrubs including dogwood, blackberry, hawthorn, viburnum, willow, spiraea, or alder, 1 to 6 feet above the ground, in an upright fork or saddled on a branch.

FOOD: Catches at least 65 species of beetles as well as other flying insects, spiders, and millipedes; eats some fruits.

REFERENCES: Bent 1942, DeGraff et al. 1980, Eckert in Farrand 1983b, Mousley 1931, Stein 1958, Terres 1980.

Willow Flycatcher

Empidonax traillii

RANGE: Breeds from central British Columbia and southern Alberta east to southern Wisconsin, southern Quebec, central Maine, and Nova Scotia south to southern California, western and central Texas, Arkansas, northern Georgia, and central and eastern Virginia. Winters in Mexico and Central America.

STATUS: Common; population is generally stable or increasing throughout its range.

HABITAT: Occurs in a variety of habitats ranging from brushy fields to willows, thickets along streams, prairie woodlots, shrubby swales, and open woodland edges. Prefers edge habitats that include thickets or groves of small trees and shrubs surrounded by grasslands, as well as the edges of gallery forests along rivers or streams. In areas where its range overlaps that of the alder flycatcher, prefers drier, smaller, more open shrubby habitat.

SPECIAL HABITAT REQUIREMENTS: Fairly open and well-spaced shrubby habitats.

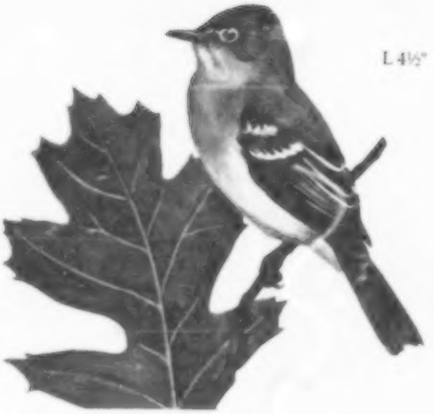
NEST: Nests usually in horizontal forks or upright crotches of shrubs or small trees, usually between 3 to 25 feet above the ground, averaging about 4 to 6 feet. Commonly nests in dogwood, hawthorn, willow, buttonbush, elder, viburnum, and blackberry. Places nest at the outer edge of a shrub or thicket, so it can be easily approached.

FOOD: Eats flying insects.

REFERENCES: Bent 1942, DeGraff et al. 1980, Eckert in Farrand 1983b, Holcomb 1972, Johnsgard 1979, King 1955, Stein 1958, Tate and Tate 1982, Walkinshaw 1966.

Least Flycatcher

Empidonax minimus



RANGE: Breeds from southern Yukon and west-central and southern Mackenzie to southern Quebec and New Brunswick, south to southern British Columbia and central Montana, across to southwestern Missouri, northern Ohio, and central New Jersey; in the Appalachians to northwestern Georgia. Winters in Mexico and Central America; also casually in southern California, southern Texas, and Florida.

STATUS: Common; population is declining slightly in parts of its range.

HABITAT: Associated with open deciduous forests, where it occurs along forest edges, burns, and clearings, floodplain forests, open shrublands, wooded margins of lakes and roads, orchards, shelterbelts, overgrown pastures, urban parks, and gardens.

SPECIAL HABITAT REQUIREMENTS: Intermediate openness in the understory of open deciduous woodlands, and some edge habitat for nesting and feeding.

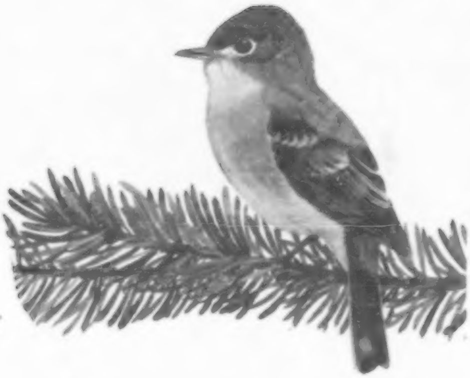
NEST: Nests in upright crotch or on horizontal fork of deciduous or coniferous trees, usually saplings or small trees, including birch, red pine, cedar, apple, dogwood, oak, sugar maple, willow, and alder. Tends to nest at the edge of a clearing 10 to 20 feet above the ground, but will nest from 2 to 60 feet.

FOOD: Feeds mainly on flying insects, most of which are caught on the wing, but some are gleaned from vegetation. Also takes a few fruits and seeds.

REFERENCES: Beal 1912, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, de Kirilene 1948, Tate and Tate 1982.

Hammond's Flycatcher

Empidonax hammondii



L 4½"

RANGE: Breeds from east-central Alaska, southern Yukon, and southwestern Alberta to northwestern Wyoming, south to east-central California, central Utah, northeastern Arizona, and north-central New Mexico. Winters in southeastern Arizona, Mexico, and Central America, casually in southern California.

STATUS: Common.

HABITAT: Inhabits tall, moist, closed-canopy montane conifer forests, sometimes with a deciduous understory. In Colorado, occurs from 7,500 to 11,000 feet in conifer-aspen woodlands; in California, in mature forests of medium to high canopy coverage from ponderosa pine up to lodgepole pine forests. In the far North, prefers deciduous forests.

SPECIAL HABITAT REQUIREMENTS: Nest sites that are cool and well shaded.

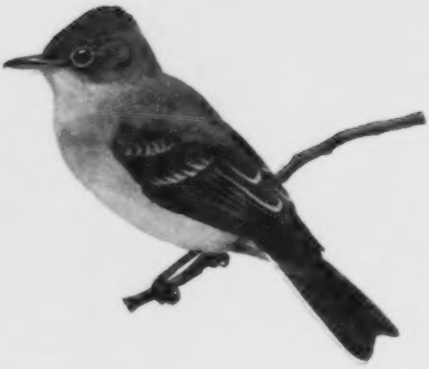
NEST: Nests in a fork of a small tree or on a horizontal branch of a large conifer or deciduous tree, usually 25 to 40 feet above the ground. Uses birch, maple, ponderosa pine, western larch, and Douglas-fir for nesting.

FOOD: Prefers to forage from the middle portions of tall conifers and aspens on flying insects.

REFERENCES: Bailey in Farrand 1983b, Beaver and Baldwin 1975, Davis 1954, Terres 1980, Verner and Boss 1980.

Dusky Flycatcher

Empidonax oberholseri



L 4¾"

RANGE: Breeds from southwestern Yukon, southern Alberta, southwestern Saskatchewan, and western South Dakota south to southern California, southern Nevada, central Arizona, and central and northeastern New Mexico. Winters in southern Arizona and Mexico; casual in southern California.

STATUS: Common.

HABITAT: Prefers shrubby sites or low- to intermediate-density forests with substantial shrub understory; generally avoids forests with a high percentage of canopy cover. Occurs in a variety of habitats, from montane chaparral to moderately dense lodgepole pine forest, including many montane conifer types and aspen; especially favors mixed woodlands or edge of small conifers and brush. In general, prefers drier, more open or patchier forests than Hammond's flycatcher.

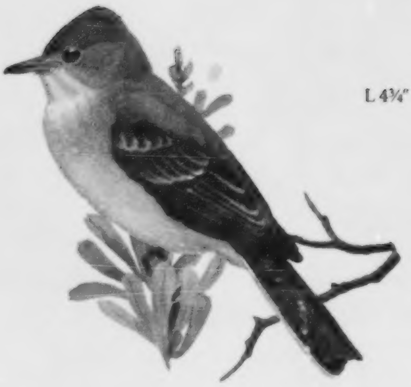
NEST: Builds nests on upright or pendant twigs or in crotches of low shrubs or trees in relatively dry sites. Usually nests 3 to 8 feet, but up to 40 feet, above the ground in willow, alder, aspen, and other trees and shrubs.

FOOD: Forages low over shrubby vegetation for flying insects.

REFERENCES: Bailey in Farrand 1983b, Harrison 1979, Johnsgard 1979, Verner and Boss 1980.

Gray Flycatcher

Empidonax wrightii



RANGE: Breeds from south-central Washington and south-central Idaho to central Colorado, south to south-central California, central Arizona, and south-central New Mexico. Winters in central Arizona and Mexico, rarely in southern California.

STATUS: Fairly common.

HABITAT: Associated with arid woodland and brushy areas, where it inhabits tall sagebrush plains, pinyon-juniper woodlands, and arid, very open pine woods. During migration and in winter it occurs in arid scrub, riparian, and mesquite woodlands.

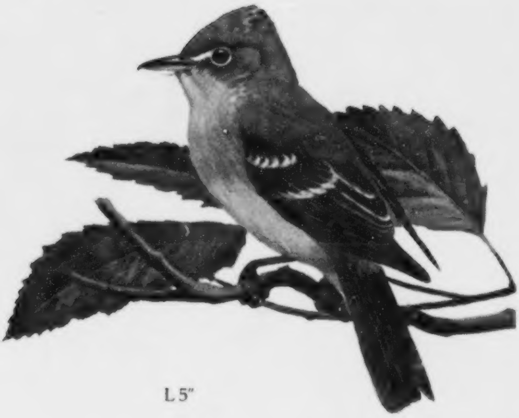
NEST: Nests in a crotch of a thornbush, juniper, or sagebrush, 2 to 5 feet above the ground, sometimes in loose colonies.

FOOD: Does most of its foraging in the spaces between bushes, and often flies to snatch insects from the ground. Catches insects from the size of tiny beetles to butterflies.

REFERENCES: Bailey in Farrand 1983b, Phillips et al. 1964, Russell and Woodbury 1941, Terres 1980.

Western Flycatcher

Empidonax difficilis



L 5"

RANGE: Breeds from southeastern Alaska, northwestern and central British Columbia, and southwestern Alberta to western South Dakota, south along the coast and mountains to southwestern California, central Nevada, central and southeastern Arizona, and western Texas. Winters in Mexico.

STATUS: Common.

HABITAT: Found in a variety of wooded habitats; prefers moist, shaded forests, either coastal or lower montane, or higher in the Rockies and Great Basin ranges. Also inhabits hollows, canyon bottoms, riparian woodlands, and deciduous, coniferous, and mixed forests.

SPECIAL HABITAT REQUIREMENTS: A sheltered nest site, possibly near a water source such as a stream, spring, or seep.

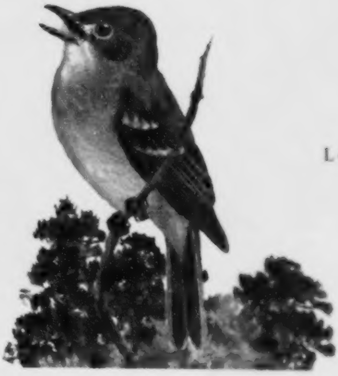
NEST: May use a variety of sites for nesting; these include rock ledges or crevices of canyon walls, often concealed by ferns or clumps of mosses; crotch or tree limb projecting from the main trunk; behind flaps of loose bark; tree cavities; or old buildings. Nest height ranges from ground level up to 30 feet.

FOOD: Commonly forages within shaded forests for insects and spiders. Also eats a few seeds.

REFERENCES: Bailey in Farrand 1983b, Beal 1912, Beaver and Baldwin 1975 Davis et al. 1963, Johnsgard 1979, Verner and Boss 1980.

Buff-breasted Flycatcher

Empidonax fulvifrons



L 4"

RANGE: Breeds very locally from the Huachuca and Chiricahua Mountains of east-central and southeastern Arizona through Mexico. Winters in Mexico.

STATUS: Rare and local.

HABITAT: Prefers open stands of pines and riparian trees, but also occurs in mixed pine and oak woods with shrubby undergrowth and on steep canyon slopes, from 5,000 to 8,500 feet. Favors open trees with bare, weedy, or grassy places.

SPECIAL HABITAT REQUIREMENTS: Forest openings.

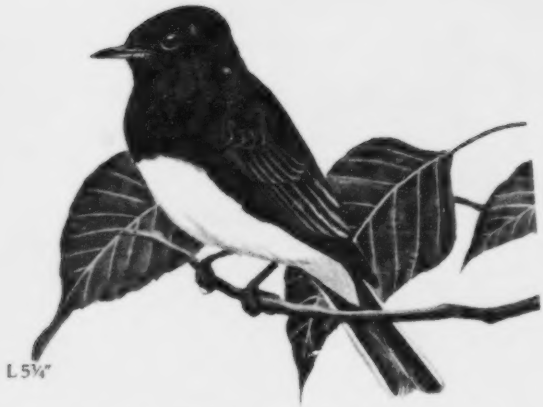
NEST: Places nest on a branch 9 to 45 feet above the ground, often sheltered by an overhanging stub of a branch. Builds nests in pines, oaks, and sycamores.

FOOD: Often forages for insects from the low scrubby understory or close to the trunk, low or at midlevel in pines.

REFERENCES: Bent 1942, Cottam and Knappen 1939, Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983b.

Black Phoebe

Sayornis nigricans



RANGE: Resident from northwestern California, southern Nevada, southwestern Utah, south-central Colorado, and western and west-central Texas south to South America. (Partially migratory, northern populations wander after the breeding season).

STATUS: Common.

HABITAT: Occurs in a variety of open and wooded habitats, usually near water, especially in drier regions. Found in the vicinity of streams, canals, lake margins, reservoirs, or other riparian sites flanked by grasslands, scattered trees, open woodlands or farmland. During migration and in winter, found at almost any source of water.

SPECIAL HABITAT REQUIREMENTS: Vertical surface for nesting that is protected from rain, near a mud source, and preferably near water.

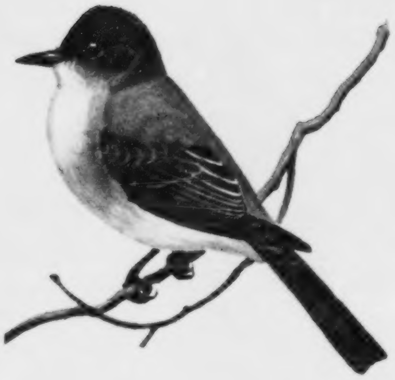
NEST: Builds a mud nest commonly under bridges, in culverts and wells, under the eaves of buildings as well as on the vertical surfaces of cliffs, rimrocks, steep creek banks, and caverns. May use the same nest site year after year.

FOOD: Catches insects over grassy fields and open water, or gleans them from plant foliage. Also eats some fruits of buckthorn.

REFERENCES: Ohlendorf 1976, Phillips et al. 1964, Terres 1980.

Eastern Phoebe

Sayornis phoebe



L 5¾"

RANGE: Breeds from northeastern British Columbia and west-central and southern Mackenzie to southwestern Quebec and central New Brunswick, south to southern Alberta, southwestern South Dakota, central New Mexico, and central and northeastern Texas across to northern Georgia and North Carolina. Winters from central Texas, the Gulf States, and Virginia south to Mexico and southern Florida; casually from Oklahoma, southern Ontario, and New England.

STATUS: Common.

HABITAT: Generally occurs near fresh running water in partially wooded habitats; frequents woodland edges, wooded ravines and cliffs, farms, and suburban areas where natural or artificial ledges are available for nesting.

SPECIAL HABITAT REQUIREMENTS: Cliffs or ledges at stream-side clearings, or structures at forest openings for nesting. Perches 5 to 15 feet high for feeding.

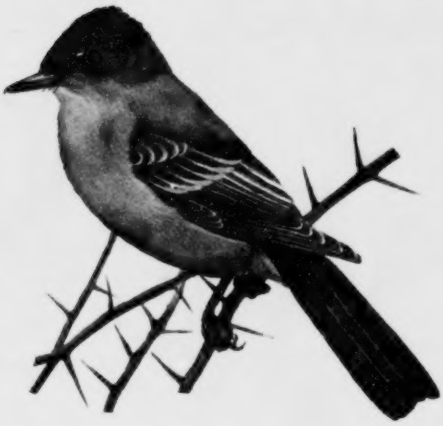
NEST: Nests on a ledge, usually sheltered above by an overhang, on natural or artificial structures, and generally near lakes or streams. May nest under bridges, culverts, or eaves of buildings, on cliffs, rock bluffs, or in ravines. Frequently uses nests from previous years, but is very adaptable in its nesting habits. Frequently the victim of cowbird parasitism.

FOOD: In late winter and early spring, subsists mainly on seeds and wild berries; at other times, feeds on insects, usually hawking them from a perch.

REFERENCES: Beal 1912, DeGraff et al. 1980, Forbush and May 1955, Hespenheide 1971, Johnsgard 1979, Tate and Tate 1982, Weeks 1979.

Say's Phoebe

Sayornis saya



L 6¼"

RANGE: Breeds from western and northern Alaska, northern Yukon, northwestern and central Mackenzie, and central Alberta to southwestern Manitoba, south between coastal ranges and central prairie states to Mexico. Winters from northern California, Arizona, central New Mexico, and central Texas south to Mexico.

STATUS: Common.

HABITAT: Inhabits open arid regions, occurring in dry, barren foothills, sagebrush plains, scrubby pine-oak-juniper woodlands, bluffs and cliffs of the badlands, grasslands, canyons, and open areas near buildings. Unlike the eastern phoebe, it is independent of surface water.

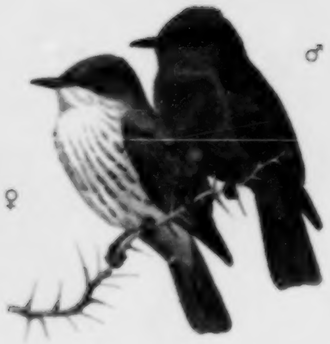
NEST: Prefers to nest in holes, crevices, on ledges, and on other protected horizontal surfaces of cliffs, rimrocks, steep creek banks, and caverns. Frequently nests in abandoned mine shafts, buildings, and under bridges. Also uses old nests of cliff swallows, barn swallows, and black phoebes; often uses the same nest in subsequent years or for successive clutches.

FOOD: Eats mostly insects (primarily grasshoppers) and some berries.

REFERENCES: Beal 1912, Bent 1942, Johnsgard 1979, Ohlendorf 1976, Terres 1980.

Vermilion Flycatcher

Pyrocephalus rubinus



L 5"

RANGE: Breeds from southern California, southern Nevada, central Arizona, central New Mexico, and western Oklahoma south to South America. Winters from southern California and southern Nevada to the Gulf Coast, east to south-central Florida, and south to Central America.

STATUS: Common.

HABITAT: Found in the arid Southwest, occuring almost exclusively near water. Favor wooded groves of cottonwood, willow, oak, mesquite, and sycamore bordering rivers, especially near open, brushy, grassy, or agricultural fields. Also occurs in widely spaced junipers and oaks, and in dry washes on the plains.

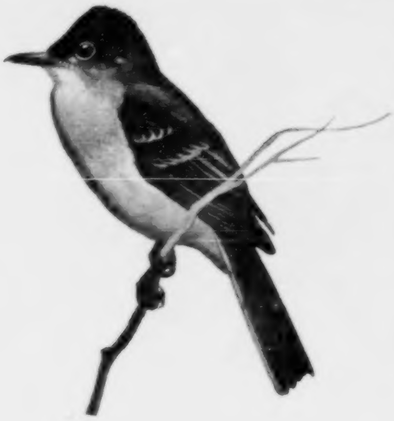
NEST: Builds nest on a small, horizontal forked branch usually 8 to 20 feet, but sometimes 40 to 50 feet, above the ground, and usually near a stream or other source of water. Nests in willow, sycamore, mesquite, cottonwood, oak, paloverde, hackberry, and other trees and bushes.

FOOD: Forages from a conspicuous perch, often only a few feet above the ground or water, for insects such as bees, grasshoppers, and small beetles.

REFERENCES: Bent 1942, Harrison 1979, Johnsgard 1979, Taylor and Hanson 1970, Terres 1980, Terrill in Farrand 1983b.

Dusky-capped Flycatcher

Myiarchus tuberculifer
(formerly Olivaceous Flycatcher)



L 5¾″

RANGE: Breeds in southeastern Arizona and southwestern New Mexico; also in Central and South America. Winters from Mexico to South America.

STATUS: Fairly common.

HABITAT: Generally found below 6,000 feet but does occur up to 7,500 feet in montane pine-oak woodlands. Prefers dense scrub oak thickets on hillsides but also occurs along canyon streams where trees grow thick enough to provide deep shade.

SPECIAL HABITAT REQUIREMENTS: Natural cavities or old woodpecker holes in trees for nesting.

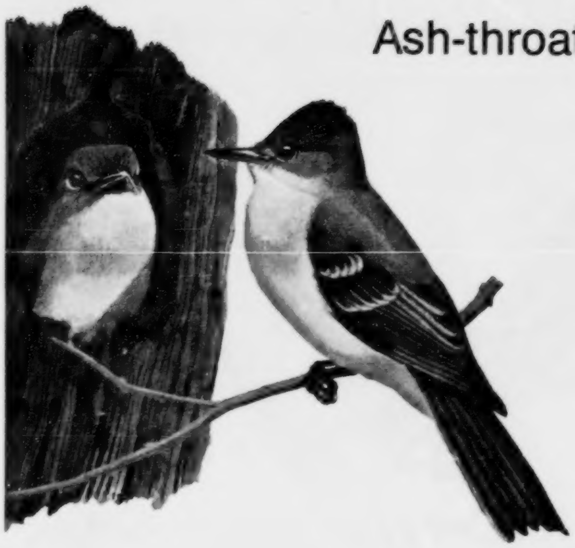
NEST: Builds nests in natural cavities in trees and stumps or in old woodpecker holes, 4 to 50 feet above the ground, in oaks, sycamores, or ashes.

FOOD: Eats small insects.

REFERENCES: Bent 1942, Cottam and Knappen 1939, Harrison 1979, Phillips et al. 1964, Terres 1980.

Ash-throated Flycatcher

Myiarchus cinerascens



L 6½"

RANGE: Breeds from northwestern Oregon and eastern Washington to Colorado and western Kansas, south to Mexico. Winters from southern California and central Arizona south to Central America.

STATUS: Common.

HABITAT: Inhabits mesquite and cactus deserts, rocky mesas, shrubby canyons, oak groves on hillsides, mesquite thickets along creek bottoms, open pinyon-juniper woodlands, and open groves of sycamore, oak, willow, or cottonwood along stream courses. Stands with a low percentage of canopy cover are preferred. Occurs from sea level to 9,000 feet in California, but is most frequently found at lower elevations.

SPECIAL HABITAT REQUIREMENTS: Natural tree cavities or old woodpecker holes for nesting.

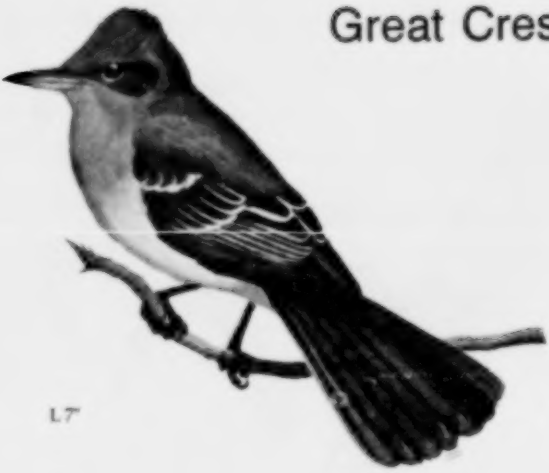
NEST: Uses a variety of cavities for nesting; natural cavities or knot holes in trees and stumps of mesquite, ash, oak, sycamore, juniper or cottonwood, or old woodpecker holes. May also nest behind loose pieces of bark, in abandoned nests of cactus wrens, in cavities in saguaro, in artificial structures, or in stalks of yucca or agave. Usually nests less than 20 feet above the ground.

FOOD: Forages over low shrubs, hawking insects and spiders. Also eats a few fruits and seeds.

REFERENCES: Beal 1912, Bent 1942, Johnsgard 1979, Terres 1980.

Great Crested Flycatcher

Myiarchus crinitus



RANGE: Breeds from east-central Alberta and central and southeastern Saskatchewan to south-western Quebec and central New Brunswick, south to central and southeastern Texas, the Gulf Coast, and Florida, and west to the eastern Dakotas, western Kansas, and west-central Oklahoma. Winters in central and southern Florida and from Mexico to South America.

STATUS: Common.

HABITAT: Prefers fairly extensive hardwood forests but is commonly found in old orchards and woodlots in farming country, clearings in mixed and deciduous forests, and wooded residential areas. Prefers forests with mature trees and fairly open canopies but will also use second-growth woodlands.

SPECIAL HABITAT REQUIREMENTS: Cavities in middle-aged to mature trees, preferably in deciduous forests.

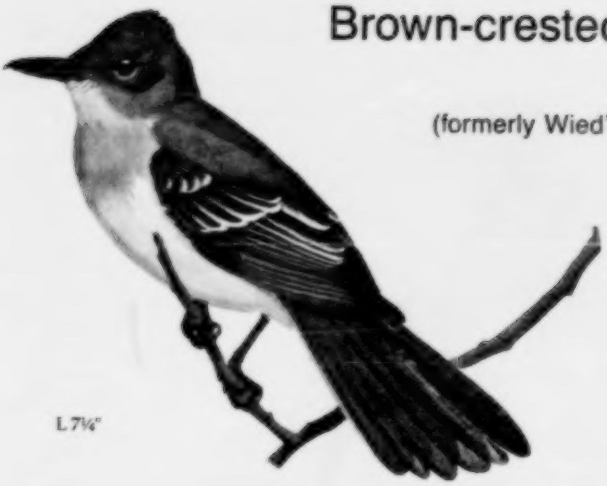
NEST: Nests in woodpecker holes or in natural cavities in live or dead trees, usually 10 to 20 feet, but sometimes from 3 to 75 feet, above the ground. May also use artificial structures such as bird houses and other hollows, with little preference shown for the shape of the opening or the cavity expanse.

FOOD: Forages in the forest canopy and gleans a variety of insects and spiders from crevices in the bark of trees; also eats some fruits.

REFERENCES: Beal 1912, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Mousley 1934a.

Brown-crested Flycatcher

Myiarchus tyrannulus
(formerly Wied's Crested Flycatcher)



RANGE: Breeds from southeastern California, extreme southern Nevada, southwestern Utah, Arizona, and southwestern New Mexico south to Central America. Winters in Mexico and Central America; rarely in southern Florida.

STATUS: Fairly common.

HABITAT: Inhabits saguaro deserts, riparian deciduous woodlands, and shade trees in urban areas. In Texas, occurs in open woodlands of mesquite, hackberry, and ash; in Arizona, frequents cottonwood, willow, and sycamore woodlands.

SPECIAL HABITAT REQUIREMENTS: Natural tree cavities or abandoned woodpecker holes for nesting.

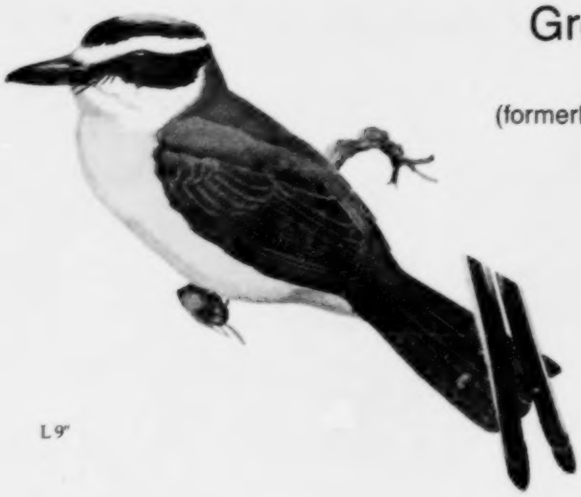
NEST: Builds nest in abandoned woodpecker holes in saguaro or in cavities in cottonwoods, sycamores, mesquite, or old fence posts 5 to 30 feet above the ground. Sometimes nests in bird houses.

FOOD: Probably eats beetles, other flying insects, and some wild berries and fruits; has been observed eating hummingbirds.

REFERENCES: Bent 1942, Gambona 1977, Oberholser 1974a, Phillips et al. 1964.

Great Kiskadee

Pitangus sulphuratus
(formerly Kiskadee Flycatcher)



RANGE: Resident in southern Texas north to Webb County and the Corpus Christi area and south to South America.

STATUS: Locally common.

HABITAT: Found in the lower Rio Grande Valley, along river beds, streams, ponds, and stagnant watercourses among large trees of mesquite, huisache, palm, baldcypress, and willow, with thick undergrowth of shrubs and small trees. Also inhabits groves and orchards and is found in trees around ranches and urban areas.

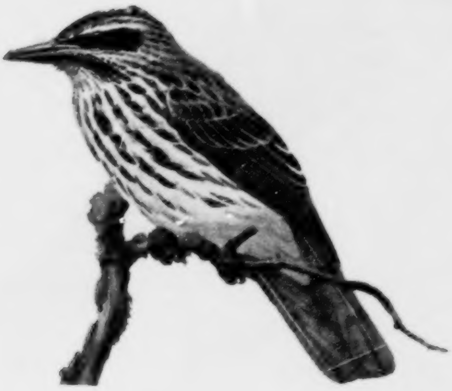
NEST: Builds nest in trees or tall shrubs, usually 10 to 20 feet, but up to 30 feet, above ground in brushy sites, low woods, along streams, marshes, or lagoons, or in cultivated areas. May nest in mesquite, palm, pine, acacia, or in a thorny bush.

FOOD: Fishes for minnows, tiny fishes, and tadpoles by perching on a low branch overhanging water and diving, barely breaking the water's surface. Also eats water insects, flying insects, and some fruits and berries, especially in winter.

REFERENCES: Bent 1942, Oberholser 1974a, Terres 1980.

Sulphur-bellied Flycatcher

Myiodynastes luteiventris



RANGE: Breeds from southeastern Arizona to Central America. Winters in South America.

STATUS: Fairly common.

HABITAT: Inhabits riparian mountain canyons, from 5,000 to 7,500 feet in elevation, where sycamore, oak, walnut, Arizona cypress, and pine are common.

SPECIAL HABITAT REQUIREMENTS: Natural cavities in trees or abandoned northern flicker holes.

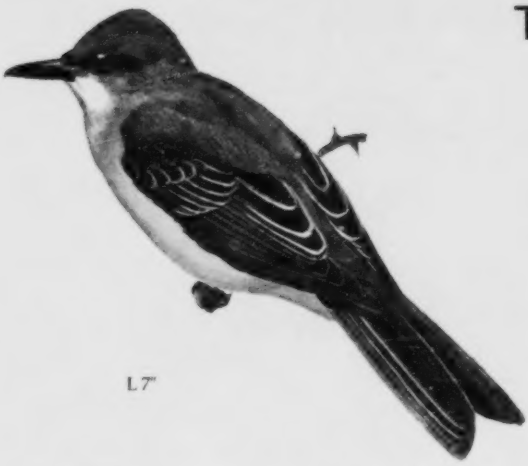
NEST: Usually builds nest in a natural cavity, typically a knothole where a large branch has broken off and a cavity has rotted out, 20 to 50 feet above the ground in living sycamores. Occasionally nests in an old flicker hole or a nest box placed high in a tree. Constructs nest on top of a loose platform built inside the cavity.

FOOD: Eats a variety of insects and spiders; also a few small fruits and berries.

REFERENCES: Bent 1942, Cottam and Knappen 1939, Ligon 1971a, Phillips et al. 1964.

Tropical Kingbird

Tyrannus melancholicus



RANGE: Breeds from southeastern Arizona to South America. Winters in Mexico south to South America.

STATUS: Uncommon and local.

HABITAT: Inhabits groves of tall trees, especially cottonwoods, next to ponds or flowing streams at low elevations. Frequently occurs along with both the western and Cassin's kingbirds.

NEST AND FOOD: Has nesting and food habits similar to those of western and Cassin's kingbirds, with which it closely associates.

REFERENCES: Kaufman in Farrand 1983b, Terres 1980.

Couch's Kingbird

Tyrannus couchii
(split from Tropical Kingbird)

RANGE: Resident from southern Texas north to Webb and Kenedy Counties, south to Central America.

STATUS: Fairly common.

HABITAT: Frequents the borders of woods, chaparral, and trees along lakes, ponds, rivers, and stagnant watercourses, where it inhabits groves of mesquite, ebony blackbead, retaima, granjena, persimmon, and thorny bushes. It also frequents urban areas.

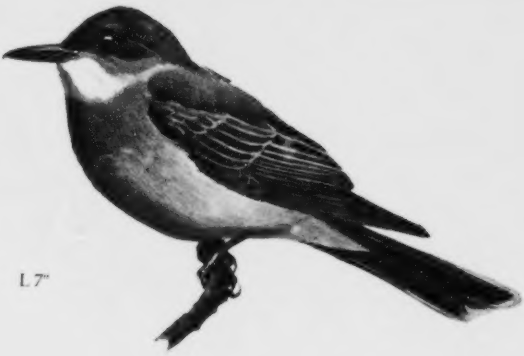
NEST: Nests on a branch or in a fork of a tree 8 to 20 feet above the ground in woodlands and brush, along marshy or brushy margins of lakes or rivers, and in cultivated areas.

FOOD: Frequently perches on tall trees to hawk insects.

REFERENCES: Bent 1942, Harrison 1979, Kaufman in Farrand 1983b, Oberholser 1974a.

Cassin's Kingbird

Tyrannus vociferans



L 7"

RANGE: Breeds from central California, southern Utah, Colorado, and southeastern Montana south to Mexico, and east to western Texas. Winters in Mexico and Central America; irregularly from central California.

STATUS: Fairly common.

HABITAT: Occurs in open country such as plains and semideserts, in a variety of habitats from desert riparian areas up to 7,500 feet and in open woodlands in southwestern mountains. Inhabits pinyon-yucca, pinyon-juniper, pine-oak, and ponderosa pine woodlands, canyons of sycamores, and in California, open valley woodlands and grasslands of the foothills among scattered oaks, cottonwoods, and sycamores.

SPECIAL HABITAT REQUIREMENTS: Tall trees for nesting.

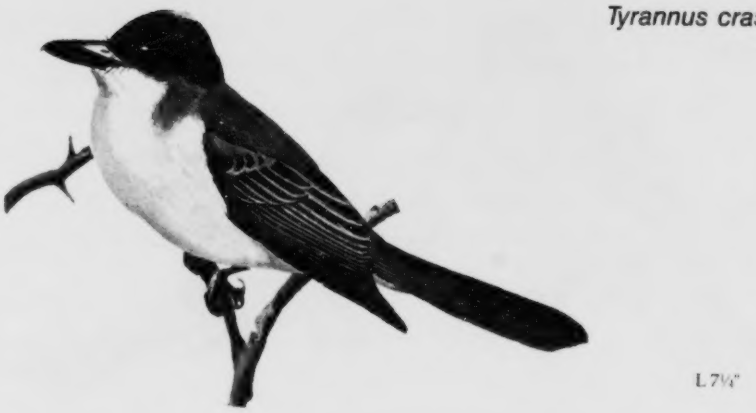
NEST: Usually nests in fairly tall trees such as pine, oak, cottonwood, walnut, hackberry, or sycamore. Places nest near the end of a horizontal limb 8 to 40 feet, but up to 100 feet, above the ground. Also places nests in bushes and on posts.

FOOD: Primarily eats insects, but also spiders and fleshy fruits.

REFERENCES: Beal 1912, Bent 1942, Hespenheide 1964, Johnsgard 1979, Ohlendorf 1974, Terres 1980, Terrill in Farrand 1983b.

Thick-billed Kingbird

Tyrannus crassirostris



RANGE: Breeds from the Patagonia and Guadalupe mountains in southeastern Arizona, and Guadalupe Canyon in extreme southwestern New Mexico south to Mexico. Winters in Mexico.

STATUS: Rare; first discovered in the United States in 1958, the range of this Mexican species has expanded northward since the middle of the 20th century.

HABITAT: Occura near sycamore trees in streamside habitats dominated by cottonwood, willow, and mesquite.

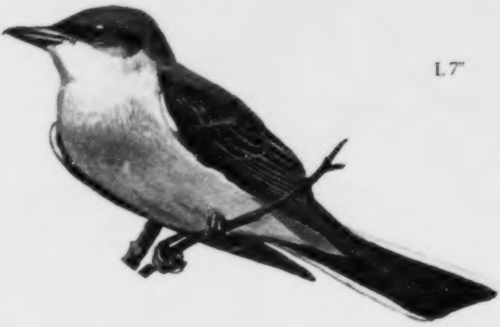
NEST: In the United States, nests in streamside sycamores 50 to 60 feet above the ground.

FOOD: Presumably eats insects; commonly flies great distances between perches.

REFERENCES: Levy 1959 , Oberholser 1974a, Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983b.

Western Kingbird

Tyrannus verticalis



L 7"

RANGE: Breeds from southern interior British Columbia to southern Manitoba and western Minnesota south to Baja California, Mexico, and southern and south-central Texas; rarely or sporadically eastward to southern Ontario, Missouri, Arkansas, and Louisiana. Winters in small numbers along the Atlantic and Gulf Coasts from South Carolina to southern Florida and west to southern Louisiana; and from Mexico to Central America.

STATUS: Common.

HABITAT: Occurs in almost any open habitat with scattered trees at low to moderate elevations, especially in agricultural regions. Commonly occurs near edge habitats such as shelterbelts, woodland borders, orchards, and hedgerows.

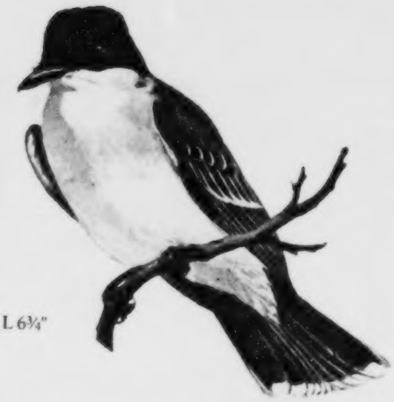
NEST: Builds nests in a variety of sites but prefers trees, when available. May nest against the trunk, in a crotch, or on a horizontal branch 8 to 40 feet above the ground in cottonwoods, oaks, sycamores, willows and other trees; if no trees are available, nests in bushes, on utility poles, or a variety of structures.

FOOD: Flycatches from a perch on poles, fence posts, or tree tops in open areas for a variety of insects; also eats millipedes, spiders, and some fruits.

REFERENCES: Beal 1912, Bent 1942, Hespenheide 1964, Johnsgard 1979, Ohlendorf 1974, Terres 1980, Terrill in Farrand 1983b.

Eastern Kingbird

Tyrannus tyrannus



L 6¾″

RANGE: Breeds from southwestern and north-central British Columbia, southern Mackenzie, and central Manitoba to southern Quebec and New Brunswick, south to northeastern California, northern Utah, northwestern and central New Mexico, the Gulf Coast, and Florida. Winters in South America.

STATUS: Common.

HABITAT: Frequents open areas with scattered trees or tall shrubs; forest edges or hedgerows along pastures, swamps, marshes, fields, or highways; open country around orchards; brushy streamsides; and sometimes open woodlands.

SPECIAL HABITAT REQUIREMENTS: Open habitats with perches for flycatching.

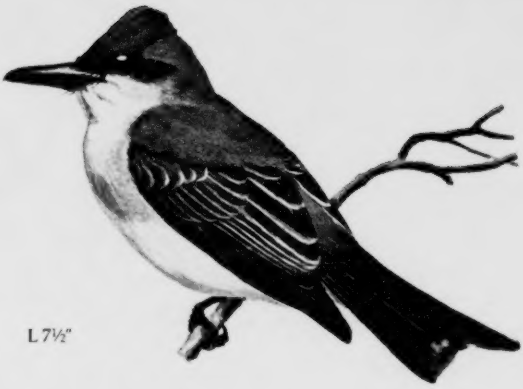
NEST: Often builds nest over water on a tree limb well away from the main trunk, or occasionally in shrubs or on an artificial structure, locating nest 10 to 20 feet, but sometimes 2 to 60 feet, above the ground. Builds nest in the crotch of a tree, on top of a dead stub, or on a fence post if no trees are available. In New England, frequently nests in the upper horizontal limbs of apple trees.

FOOD: Consumes over 200 kinds of insects and more than 40 kinds of fruits, catching most insects by hawking from a perch.

REFERENCES: Beal 1912, Bent 1942, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Terres 1980.

Gray Kingbird

Tyrannus dominicensis



RANGE: Breeds along the Atlantic and Gulf Coasts from southeastern South Carolina south to the Florida Keys, and west to southern Alabama and islands off the coast of Mississippi, south in coastal regions to South America. Winters from Hispaniola south to South America, casually in southern Florida.

STATUS: Locally common.

HABITAT: Found within the coastal zone, where it occurs in mangrove swamps, marsh edges, along roadsides, and in woodlands, groves, and yards in urban or rural areas.

SPECIAL HABITAT REQUIREMENTS: Habitats within the coastal zone.

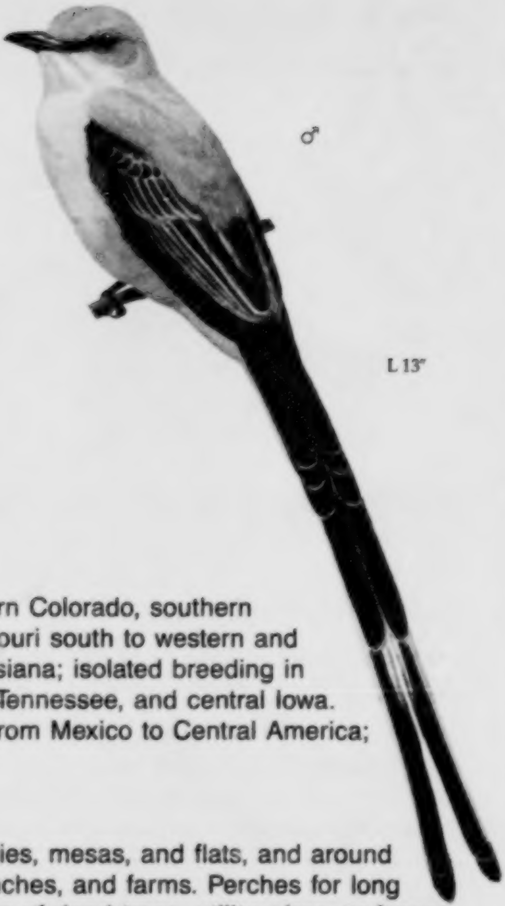
NEST: Nests in a fork or saddle on a horizontal limb of a tree or shrub 3 to 17 feet above the ground, often hanging over water. Prefers mangroves for nesting, but also nests in oaks, acacia, sea grape, casuarina, and cabbage palm. Shows a strong attachment to the nesting site, returning yearly to the same tree or clump of trees.

FOOD: Flycatches from exposed perches for insects; also eats lizards and fruits of tropical trees.

REFERENCES: Bent 1942, Harrison 1975, Sykes in Farrand 1983b, Terres 1980.

Scissor-tailed Flycatcher

Tyrannus forficatus



RANGE: Breeds from southeastern Colorado, southern Nebraska, and north-central Missouri south to western and southern Texas and western Louisiana; isolated breeding in northeastern Mississippi, central Tennessee, and central Iowa. Winters in southern Florida and from Mexico to Central America; casually in southern Louisiana.

STATUS: Common.

HABITAT: Occurs on plains, prairies, mesas, and flats, and around pastures, woodland clearings, ranches, and farms. Perches for long periods on tall prairie plants, limbs of dead trees, utility wires, or fences.

SPECIAL HABITAT REQUIREMENTS: Open habitats with elevated perches.

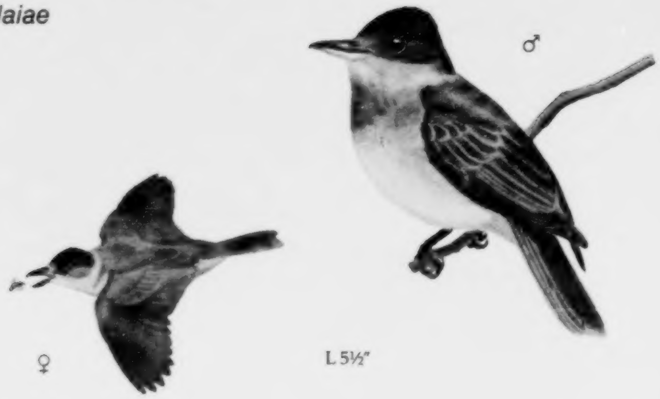
NEST: Typically nests in cottonwoods, elms, or other hardwood species, in exposed sites 6 to 30 feet above the ground. Prefers isolated trees to those growing in clumps or heavier cover; occasionally uses fence posts, telephone poles, windmill towers, or buildings for nest sites.

FOOD: Flies from a perch to catch a variety of insects, but also picks up insects from the ground. Also eats few fruits, berries, and seeds.

REFERENCES: Beal 1912, Fitch 1950, Johnsgard 1979, Oberholser 1974a.

Rose-throated Becard

Pachyramphus aglaiae



RANGE: Breeds in southeastern Arizona and in southern Texas (Cameron and Hidalgo Counties) and in Mexico and Central America. Winters in Mexico and Central America.

STATUS: Rare and local.

HABITAT: Inhabits mature groves of trees situated near flowing water, preferably stands of sycamore, cottonwood, and willow.

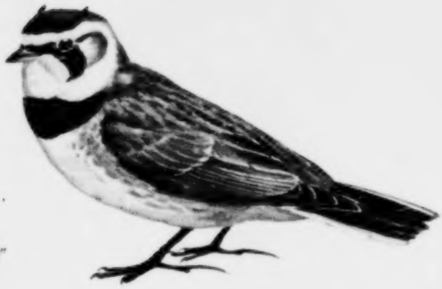
NEST: Builds an immense bushel-basket nest of strips of fibrous plant stems, suspending it from twigs at the end of a drooping branch 30 to 60 feet above the ground. Often places nests in sycamores but also uses cottonwoods, baldcypress, and willows. Will often build in the same site as the previous year's nest, or very close to the site.

FOOD: Perches on interior branches rather than exposed perches while feeding. Eats insects and some wild fruit.

REFERENCES: Oberholser 1974b, Phillips 1949, Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983b.

Horned Lark

Eremophila alpestris



RANGE: Breeds in North America from western and northern Alaska, the Arctic Coast of northern Canada, Prince Patrick, Devon, and Baffin Islands, and northern Labrador south to Mexico, southwestern Louisiana, central Missouri, northern Alabama, and North Carolina. Winters from southern Canada south throughout the breeding range, and locally or irregularly to the Gulf Coast and southern Florida.

STATUS: Locally common.

HABITAT: Inhabits a wide variety of open habitats, from coastal dunes and alpine tundra to prairies and deserts. Prefers areas with a minimum of vegetation, such as natural or planted low-stature grasslands, cultivated and plowed fields, golf courses, airports, and other relatively barren areas. In winter, groups in small-to-enormous flocks on open, barren sites similar to its breeding habitat.

SPECIAL HABITAT REQUIREMENTS: Bare ground for nesting.

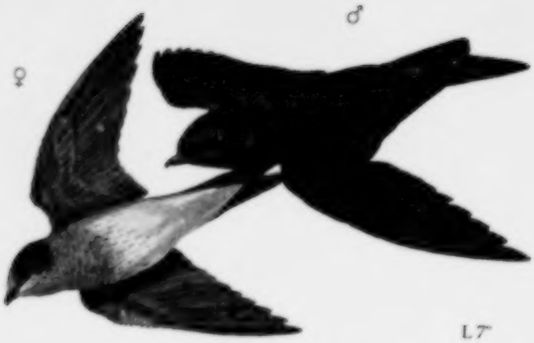
NEST: Nests in a depression on the ground, placed so that the upper edge of the nest is level with the ground surface. Often paves the nest with small pebbles along a portion of the rim. Places nest where there is little or no vegetational cover around the nest, or next to a clump of grass or a rock.

FOOD: In summer, feeds primarily on insects; in winter, it consumes seeds of grasses, weeds, and waste grains.

REFERENCES: Beal and McAtee 1912, Beason and Franks 1974, Cottam and Hanson 1938, DeGraff et al. 1980, Johnsgard 1979, Pickwell 1931, Terres 1980, Verbeek 1967.

Purple Martin

Progne subis



RANGE: Breeds from southwestern British Columbia south to Baja California; and from northeastern and east-central British Columbia and central Alberta to southern Ontario and New Brunswick south to Mexico, the Gulf Coast, and southern Florida, and west to eastern Idaho and central Utah. Local in the Rocky Mountains but avoids most other mountainous areas. Winters in South America, casually in Florida.

STATUS: Locally common; of special concern on blue list.

HABITAT: Inhabits open and cut over woodlands, open grassy river valleys, meadows around pools, shores of lakes, marsh edges, agricultural lands, saguaro deserts, parks and towns. Prefers habitats near open water. In the East, breeds almost exclusively in artificial colonial martin houses; in the West, still uses woodpecker-made cavities to a large extent.

SPECIAL HABITAT REQUIREMENTS: Large, multiroomed martin houses, tree cavities, or abandoned woodpecker holes for nesting, and open spaces for foraging.

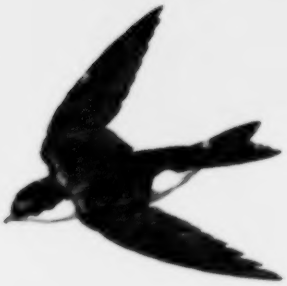
NEST: Originally nested in cavities in large snags but is now largely dependent upon man-made martin houses. Nests colonially in houses preferably set 15 to 20 feet above the ground in open settings near suitable perches such as wires. Also uses cavities in cliffs or among loose rocks, and crevices in old buildings. In the west, still depends on old woodpecker holes for nesting; in the Arizona deserts, nests in old woodpecker holes in saguaro cacti.

FOOD: Catches flying insects on the wing for most of the diet. Also picks up a few insects and spiders from the ground.

REFERENCES: Allen and Nice 1952, Beal 1918, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Tate and Tate 1982, Terres 1980.

Tree Swallow

Tachycineta bicolor



L 5"

RANGE: Breeds from western and central Alaska and central Yukon to northern Quebec and central Labrador south along the Pacific Coast to southern California and south-central New Mexico, generally sporadic or irregular as a breeder east of the Rocky Mountain States and south of the upper Mississippi and Ohio Valleys, or along the Atlantic Coast south of Massachusetts. Winters from southern California, southwestern Arizona, Texas, the Gulf Coast, and the Atlantic Coast from New York south to Central America.

STATUS: Common.

HABITAT: Prefers open woodlands near ponds, small lakes, or marshes. Occurs around farmlands, river bottomlands, beaver ponds, wooded swamps, and marshes where dead standing trees are in or near water.

SPECIAL HABITAT REQUIREMENTS: Cavities for nesting; suitable cavity trees must have a minimum dbh of 10 inches, and open feeding areas such as meadows, marshes, or open water.

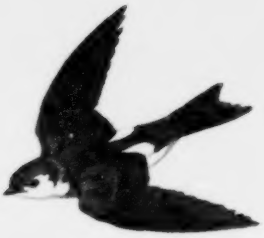
NEST: Prefers to nest in natural cavities and abandoned woodpecker holes, but if nesting holes are scarce, will accept nest boxes placed in open fields or use crevices in buildings. Uses cavities in the trunk or limb of live or dead trees, especially if the cavity is 3 to 15 feet above water. Usually nests singly but is loosely colonial if there are abundant suitable cavities and a good food supply.

FOOD: Feeds mostly on flying insects over open areas. In early spring and in cold weather when insects are scarce, subsists on wild berries and seeds, especially bayberries.

REFERENCES: Beal 1918, Chapman 1955, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Scott et al. 1977, Terres 1980, Thomas et al. 1979.

Violet-green Swallow

Tachycineta thalassina



L 4¾"

RANGE: Breeds from central Alaska, central Yukon, and extreme southwestern Mackenzie south to Mexico, and east to southwestern Saskatchewan, western South Dakota, and western Nebraska. Winters from central coastal and southern California south to Central America.

STATUS: Common.

HABITAT: Inhabits coniferous, deciduous, and mixed forests, preferring open or broken woods, or the edges of dense woodlands. Occurs around towns, in woodland clearings, especially near lakes and streams, and if snags are present, in canyons, and in mountains from the foothills to near timberline.

SPECIAL HABITAT REQUIREMENTS: Cavities or crevices for nesting and open terrain or forest openings for feeding.

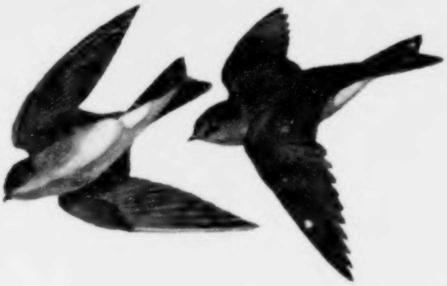
NEST: Builds nests in old woodpecker holes, natural tree cavities, crevices in rocky cliffs, nesting boxes, niches of old buildings, and when cavities are scarce, in old nests of cliff swallows and burrows of bank swallows. In Colorado, prefers cavities in ponderosa pine but also nests in aspen and other trees.

FOOD: Consumes only insects, which catches and eats while on the wing.

REFERENCES: Bailey and Niedrach 1965, Beal 1918, Bent 1942, Combellack 1954, Johnsgard 1979, Scott et al. 1977, Terres 1980.

Northern Rough-winged Swallow

Stelgidopteryx serripennis



L 4¾"

RANGE: Breeds from southeastern Alaska, central British Columbia, and southern Alberta to southwestern Quebec and central Maine south to Central America and south-central and southwestern Florida. Winters from southern Texas, southern Louisiana, and southern Florida south to Mexico and Central America.

STATUS: Fairly common.

HABITAT: Inhabits open country, including open woodlands, wherever a suitable nest site near water can be found. In the East, frequents rocky gorges, shale banks, stony road cuts, railroad embankments, river valleys, and stream banks. In the Midwest and West, often found around gravel pits, stream banks, and other exposed banks of sand, dirt, or gravel.

SPECIAL HABITAT REQUIREMENTS: Suitable nest sites preferably near, but up to 1/2 mile from water.

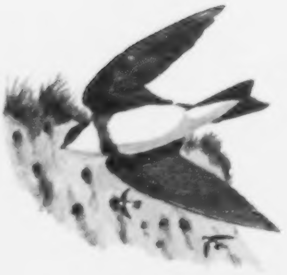
NEST: Excavates nests in banks of clay, sand, or gravel or uses abandoned bank swallow or kingfisher burrows and sometimes natural rock crevices, drainpipes, culverts, cracks in bridges, and crevices in buildings. May nest singly, in scattered groups, or in small colonies; tends to be more colonial in the western part of its range.

FOOD: Feeds on the wing, catching primarily flies and other flying insects.

REFERENCES: Beal 1918, DeGraff et al. 1980, Johnsgard 1979, Lunk 1962.

Bank Swallow

Riparia riparia



L 4¾"

RANGE: Breeds from western and central Alaska and central Yukon to central Quebec and southern Labrador, south to southern California, western Nevada, southern New Mexico, southern Texas, northern Alabama, eastern Virginia, and casually, northwestern North Carolina and south-central South Carolina. Winters in South America.

STATUS: Locally common; population is declining over parts of its range.

HABITAT: Prefers grasslands and cultivated fields but uses a variety of open habitats, usually near water and suitable nest sites. Nests in riverbanks, borrow pits, gravel pits, road cuts, sand banks and other exposed banks of sand, gravel or clay.

SPECIAL HABITAT REQUIREMENTS: Vertical banks of sand, gravel, or clay in an open habitat, preferably near lakes, ponds, or marshes.

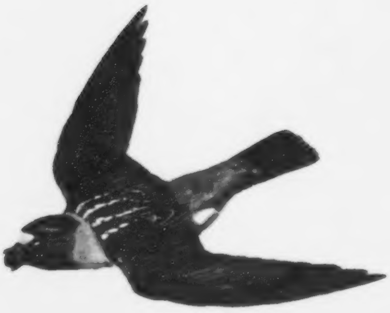
NEST: Excavates a burrow near the top of a vertical bank (or repairs an existing burrow) ranging from 9 inches to 6 feet, but generally about 2 feet, in length. Forms dense colonies, with up to several hundred nests in a bank.

FOOD: Catches primarily flies while flying over water or grasslands, especially pastures.

REFERENCES: Allen 1933, Beal 1918, Beyer 1938, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Peterson 1955, Tate and Tate 1982.

Cliff Swallow

Hirundo pyrrhonota



L 5"

RANGE: Breeds from western and central Alaska and central Yukon to northern Ontario, southern Quebec and New Brunswick south to Mexico, southwestern Louisiana, northern portion of the Gulf States and southern North Carolina; also in the Lake Okeechobee region of southern Florida. Winters in South America.

STATUS: Common in the West, locally fairly common in the East; overall populations are stable or increasing, except in some northeastern States where it is of special concern on the blue list for declining species.

HABITAT: Originally restricted to the vicinity of cliffs and banks; now occurs over open country around farmlands, towns, bridges, dams, freeway overpasses, and other areas near mud supplies and potential nest sites.

SPECIAL HABITAT REQUIREMENTS: A vertical substrate with an overhang for nest attachment, a supply of mud suitable for nest construction, fresh water with a smooth surface for drinking, and an open foraging area near the nest site.

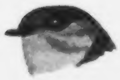
NEST: Originally nested on bluffs, cliffs, deep gorges in mountains, and sometimes on the side of large pine trees and in caves; has adapted to building its gourdlike mud nests under the eaves of, or in, buildings, under bridges, in culverts, on the face of dams, and under freeway overpasses. Forms colonies of up to several hundred nests in favorable locations.

FOOD: Consumes insects caught while flying high, often above 100 feet, as nearly 100 percent of the diet.

REFERENCES: Beal 1918, Bent 1942, DeGraff et al. 1980, Emlen 1954, Forbush and May 1955, Johnsgard 1979, Mayhew 1958, Samuel 1971, Tate and Tate 1982.

Cave Swallow

Hirundo fulva



L 4¾"

RANGE: Breeds from Carlsbad Caverns in southeastern New Mexico and from western and south-central Texas south through Mexico. Winter range is unknown.

STATUS: Locally fairly common; range is expanding as it adapts to human-altered environment.

HABITAT: Originally restricted to open country in the vicinity of limestone caves and sinkholes; has adapted its nesting habits to artificial structures. Now also nests around culverts and bridges in the northern part of its range where water and mud are available.

SPECIAL HABITAT REQUIREMENTS: Extensive roughened or pitted surfaces for nesting in caves, water for drinking, and mud suitable for nest construction.

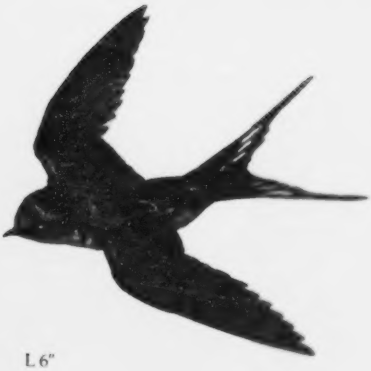
NEST: Forms colonies and in caves, tends to build its mud nests in isolated crevices and pockets, or under overhanging ledges. Also nests in sinkholes, in highway culverts, and under bridges. May reuse nest year after year and will sometimes share the same nest site with barn swallows.

FOOD: Needs a source of water, such as a seep, spring, open water tank, or pond for drinking. (The diet of this swallow in the United States is currently unknown.)

REFERENCES: Martin 1974, 1981, Selander and Baker 1957, Wauer and Davis 1972.

Barn Swallow

Hirundo rustica



L 6"

RANGE: Breeds from south-coastal and southeastern Alaska and southern Yukon across to central Manitoba, northern Ontario, and southern Quebec south to Mexico, the Gulf Coast, north-central Florida, and southern North Carolina. Winters in Central and South America, casually north to the southwestern United States and southern Florida.

STATUS: Common.

HABITAT: Occurs virtually throughout the whole United States wherever suitable nest sites are found, but favors farmlands, open forests, rural, and suburban areas.

SPECIAL HABITAT REQUIREMENTS: Overhead protection, especially buildings, for nesting.

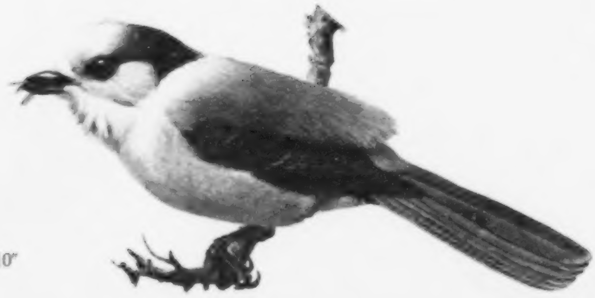
NEST: Originally nested on cliffs and in caves and rock crevices in mountains, along rocky coasts, and on high shores of lakes and rivers. Still uses such sites in the north and on the Pacific Coast, but in other areas nests on horizontal beams or ledges inside barns or other buildings, or under bridges, culverts, or wharves. Usually nests colonially.

FOOD: Prefers to feed over water or fields, catching flying insects (especially flies) on the wing.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Samuel 1971.

Gray Jay

Perisoreus canadensis



L 10"

RANGE: Breeds from western and central Alaska, northern Mackenzie, and southwestern Keewatin across to northern Quebec and northern Labrador, south to northern California, central Idaho, east-central Arizona, Black Hills of South Dakota, central Saskatchewan, northern Minnesota, southern Ontario, and northern New England. Winters generally throughout the breeding range.

STATUS: Locally common.

HABITAT: Inhabits northern coniferous forests, especially dense spruce and pine. Occasionally occurs in mixed forests and deciduous woodlands near coniferous forests.

SPECIAL HABITAT REQUIREMENTS: Conifer forests.

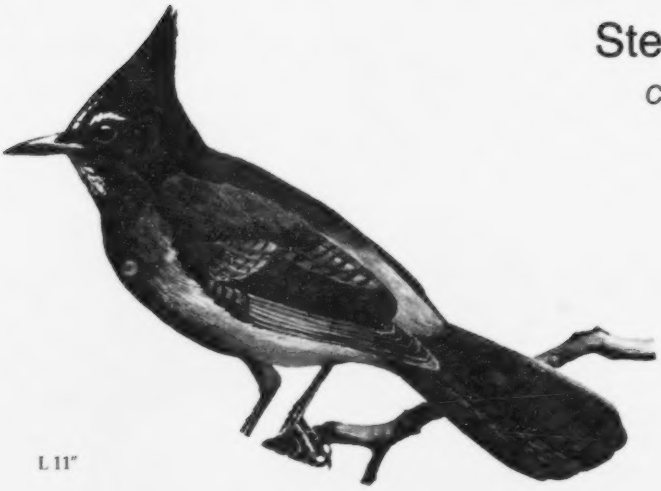
NEST: Builds nest in late winter while there is still deep snow in the woods, typically in a crotch or on a horizontal branch near the trunk of a conifer, often less than 10 feet but up to 30 feet above the ground. Usually hides well.

FOOD: Regularly catches food, producing a special saliva that helps bind the food together, so it can be firmly held in conifer foliage. Is omnivorous and typically eats insects, conifer seeds, berries, young birds, small mammals, lichens, fungi, and carrion. Commonly steals food from campers.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Goodwin 1976, Johnsgard 1979, Ouellet 1970, Rutter 1969.

Steller's Jay

Cyanocitta stelleri



L 11"

RANGE: Resident from south-coastal and southeastern Alaska to southwestern Alberta south to southern California, Arizona, central New Mexico, Central America, and western Texas, and east to western Montana and western Nebraska.

STATUS: Common.

HABITAT: Generally inhabits coniferous forests throughout its range, but occasionally occurs in mixed and deciduous woodlands, and ventures into orchards and gardens. Is especially frequent in the ponderosa pine zone but limited numbers occur in the pinyon-juniper and spruce-fir zones. Favors edges of forest openings over extensive, unbroken woodlands.

SPECIAL HABITAT REQUIREMENTS: Predominately coniferous woodlands.

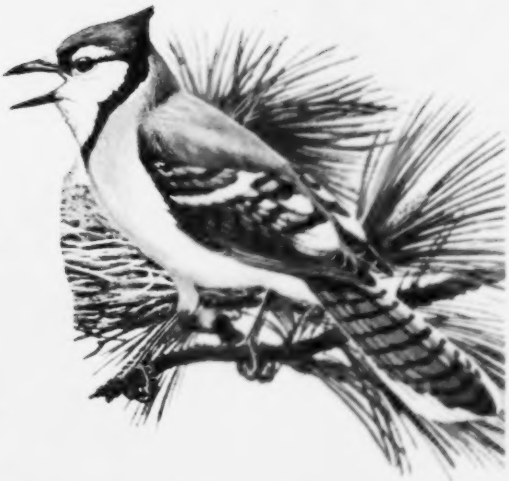
NEST: Usually builds nest on a horizontal branch of a conifer from 8 to 40 feet, but up to 100 feet, above the ground. Occasionally locates nest in a shrub or tree cavity.

FOOD: Usually forages on the ground and in trees for seeds, nuts, acorns, fruits, insects, spiders, and bird eggs and nestlings.

REFERENCES: Gibson in Farrand 1983b, Goodwin 1976, Johnsgard 1979, Wilmore 1977.

Blue Jay

Cyanocitta cristata



L 10"

RANGE: Resident from extreme east-central British Columbia and central and southeastern Alberta to southern Quebec and Newfoundland south to central and southeastern Texas, the Gulf Coast, and southern Florida, and west to eastern Montana and east-central New Mexico. Northern populations are partly migratory to the southern parts of the breeding range.

STATUS: Common.

HABITAT: Inhabits deciduous and mixed woodlands, especially prefering those with oak, beech, and hickory, but also occurs in coniferous forests, preferably where pines predominate. Also frequents wooded islands, farms, gardens, parks, cities — almost anywhere trees are found in grassland areas.

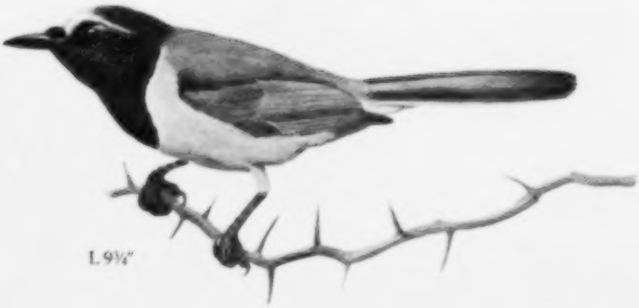
NEST: Hides nest well in the fork, crotch, or outer branches of trees, occasionally in shrubs, typically from 10 to 25 feet, but ranging from 5 to 50 feet, above the ground. Prefers conifer thickets in mixed woodlands for nesting.

FOOD: Forages from the tree tops to the ground for its food, which consists of 76 percent vegetable and 24 percent animal matter. Feeds omnivorously, primarily on mast but also takes a variety of other foods. Also eats grains, weed seeds, wild fruits, insects, a few mice, young birds and eggs, fish, salamanders, and crustaceans. Is easily drawn to bird feeders.

REFERENCES: Beal 1904, DeGraff et al. 1980, Goodwin 1976, Johnsgard 1979, Wilmore 1977.

Green Jay

Cyanocorax yncas



RANGE: Resident in southern Texas; also from Mexico to South America.

STATUS: Fairly common.

HABITAT: Found in dense thickets and woodlands along the lower Rio Grande, in mesquite woodlands, and thickets of mesquite, retaima, and hackberry. In winter, wanders in small flocks in more open country, frequenting woods of huisache, ebony blackbean, and anacua.

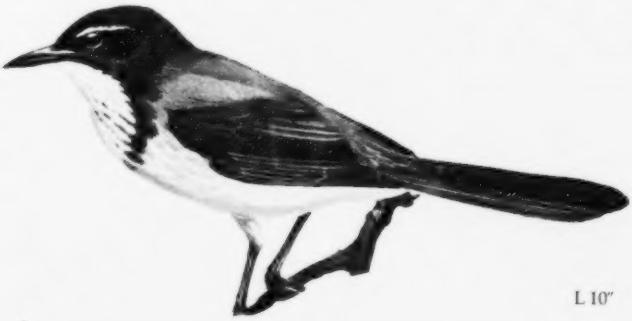
NEST: The nest is built in a fork or outer branches of small trees or bushes from 5 to 15 feet above the ground, in dense woods or thickets along streams.

FOOD: Feeds omnivorously, including insects, spiders, seeds, acorns, palmetto fruit, and eggs and young of birds in the diet.

REFERENCES: Cottam and Knappen 1939, Oberholser 1974b, Terres 1980, Wilmore 1977.

Scrub Jay

Aphelocoma coerulescens



L 10″

RANGE: Resident from southwestern Washington to southern Wyoming and Colorado south to Baja California, western and west-central Texas, and Mexico; also on Santa Cruz in the Channel Islands in California, and in central Florida.

STATUS: Locally common; population is declining in Florida because of clearing and development of orange groves.

HABITAT: Inhabits a variety of brushy areas from dense chaparral, open woodlands and residential areas in the Pacific States to pinyon-juniper, scrub oak, and less frequently mixed oak and ponderosa pine in the interior West, and humid scrub-oak communities in Florida. Prefers borders of brushy ravines and wooded creek bottoms. In Florida, usually found near small openings or at the edge of the scrub rather than in dense, unbroken scrub.

SPECIAL HABITAT REQUIREMENTS: Scrub habitats.

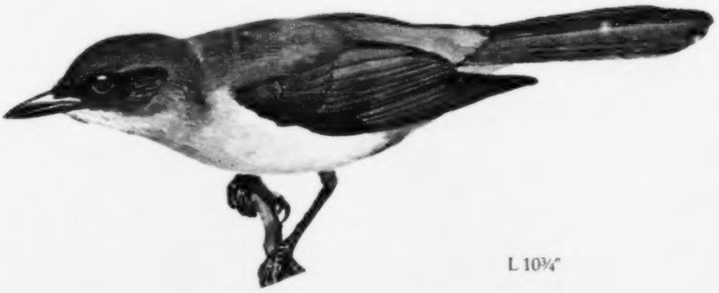
NEST: Builds nest in pinyons, oaks, tall shrubs, or vine tangles, generally less than 10 feet, but up to 30 feet, above the ground. Usually nests singly, but in Florida may nest in scattered colonies with up to 6 nests in small tracts of scrub.

FOOD: Consumes many kinds of insects and other invertebrates. Also eats acorns, seeds of palmetto, grains, fruits, mice, eggs and nestlings of birds, small reptiles, and frogs.

REFERENCES: Goodwin 1976, Harrison 1975, Johnsgard 1979, Tate and Tate 1982, Terres 1980, Terrill in Farrand 1983b, Wilmore 1977.

Gray-breasted Jay

Aphelocoma ultramarina
(formerly Mexican Jay)



L 10¾″

RANGE: Resident from central Arizona, southwestern New Mexico, and western Texas south to Mexico.

STATUS: Common.

HABITAT: Inhabits canyons and hillsides of oak and pine-oak woodlands, adjacent riparian forests, and occasionally ventures into adjacent pure pine woodlands or more open scrub, from 2,000 to 9,000 feet in elevation.

SPECIAL HABITAT REQUIREMENTS: Live oaks within its home range.

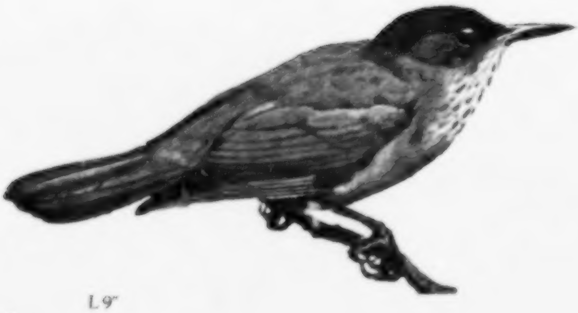
NEST: Builds nest in a fork, crotch, or on a horizontal branch of oaks or pines, typically 10 to 25 feet, but ranging from 6 to 54 feet above the ground. May nest singly or in loose colonies, and participates in communal nest building.

FOOD: Usually forages on the ground and in trees for acorns, insects, lizards, eggs and young birds, fruits, and seeds.

REFERENCES: Goodwin 1976, Gross 1949, Terres 1980, Wilmore 1977.

Pinyon Jay

Gymnorhinus cyanocephalus



L 9"

RANGE: Breeds from central Oregon to western South Dakota, south to Baja California, northwestern and east-central Arizona, central New Mexico, and western Oklahoma. Winters throughout the breeding range and irregularly from southern Washington to northwestern Montana south to Mexico and central Texas.

STATUS: Common.

HABITAT: Typically inhabits pinyon-juniper woodlands of the foothills and lower mountain ranges in the West, but also occurs in open ponderosa pine forests where the soil is dry and trees are small and scattered. Locally nomadic outside the nesting season in response to fluctuating food supplies; during years of a poor seed crop, may move in flocks hundreds of miles to find food.

SPECIAL HABITAT REQUIREMENTS: Open woodlands for nesting and an adequate supply of seeds, especially pinyon nuts.

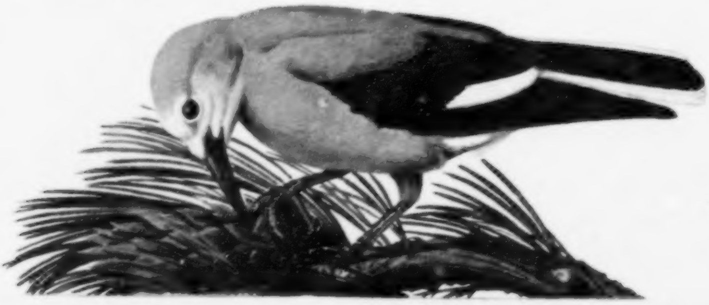
NEST: Usually nests in scattered colonies of up to 100 birds, usually with just one nest per tree. Builds nest away from the center of a tree on a low, southerly facing horizontal limb, and generally 6 to 20 feet, but up to 85 feet, above the ground. Pinyons, junipers, ponderosa pines, and scrub oaks are common nest trees.

FOOD: Forages in trees and on the ground, principally for seeds, especially pinyon nuts, but also seeds of ponderosa pines and other conifers, and caches them for use during the next breeding season. It also eats fruits, berries, insects, and eggs and nestlings of small birds.

REFERENCES: Balda and Bateman 1972, Goodwin 1976, Johnsgard 1979, Terres 1980, Wilmore 1977.

Clark's Nutcracker

Nucifraga columbiana


L 11"

RANGE: Resident from central British Columbia and southwestern Alberta to western and southeastern Wyoming, south through the mountains of Washington, Oregon, California, and Nevada to Baja California, and in the Rockies to east-central Arizona and southern New Mexico. Occasionally wanders during nonbreeding season to lower mountains and lowlands beyond breeding range.

STATUS: Common.

HABITAT: Prefers high-altitude rocky sites with open or broken coniferous forest and clearings, but occurs in the mountains from 3,000 to 13,000 feet. Inhabits a variety of coniferous forest types including ponderosa pine, pinyon-juniper, and spruce-fir.

SPECIAL HABITAT REQUIREMENTS: Seeds of pines for food.

NEST: Nests mostly between 6,000 and 8,000 feet in elevation in a wind-sheltered site. Builds nest in a conifer, well out on a branch or in a bushy top from 7 to 150 feet above the ground.

FOOD: Forages on the ground and in trees, primarily on the seeds of conifers and on insects. Also eats seeds of lupine, oats, grains, berries, small mammals, eggs and nestlings of birds, and carrion.

REFERENCES: Bevier in Farrand 1983b, Cottam 1945, Goodwin 1976, Mewaldt 1956, Terres 1980, Verner and Boss 1980, Wilmoer 1977.

Black-billed Magpie

Pica pica

RANGE: Resident from south-coastal and southern Alaska to northern Alberta, central Manitoba, and western Ontario south to northeastern and east-central California and south-central Nevada, across to western and northeastern Oklahoma. Casual north and east of range in fall and winter.

STATUS: Common.

HABITAT: Typically inhabits open country with short, scattered, clumped or grazed vegetation, or exposed ground, and with patches of scrub, large bushes, or trees. Avoids dense forests and strictly desert regions. Found nearly up to timberline in the mountains; frequents a variety of open habitats including sagebrush, agricultural lands, pastures, grasslands, forest edges, streamsides with tall thickets and scattered trees, open woodlands, and urban areas.

SPECIAL HABITAT REQUIREMENTS: Open country for foraging, trees or large bushes for nesting and cover.

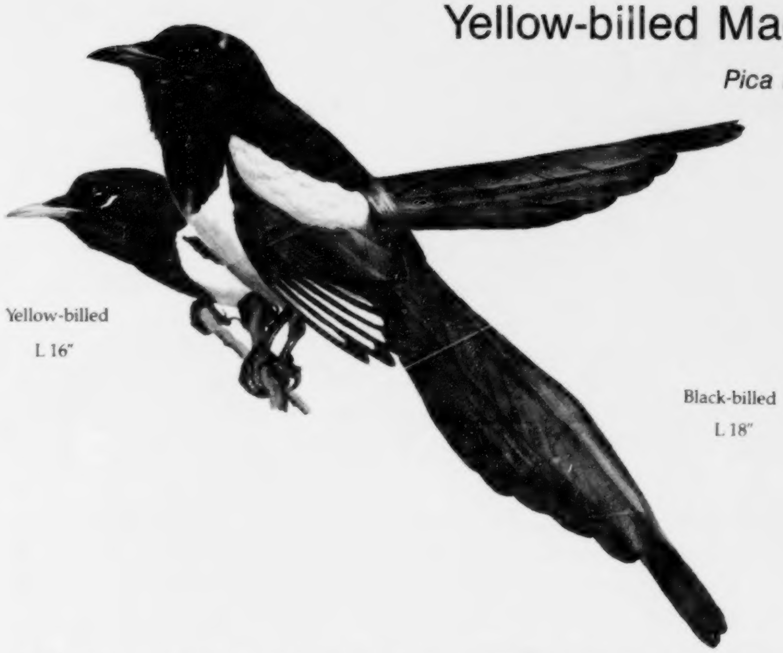
NEST: Builds a bulky stick nest from a few feet to 25 feet above the ground in a variety of trees or tall bushes, especially thorny ones. Nests in small, scattered colonies along streams, in woods, or in thickets, less often on buildings, cliff ledges, high banks, or on the ground among bushy cover. Sometimes reuses the old nest but usually builds a new nest each year.

FOOD: Forages mainly on the ground, sometimes in trees or shrubs, for insects, especially grasshoppers. Also eats snails, slugs, millipedes, spiders, fishes, reptiles, amphibians, young birds and eggs, small mammals, carrion, and wild and cultivated fruits.

REFERENCES: Ballard in Farrand 1983b, Goodwin 1976, Johnsgard 1979, Kalmbach 1927, Linsdale 1937, Terres 1980, Wilmore 1977.

Yellow-billed Magpie

Pica nuttalli



RANGE: Resident in California in the Sacramento and San Joaquin Valleys, and in valleys of the coast ranges from San Francisco Bay south to Santa Barbara County.

STATUS: Common.

HABITAT: In farming country, foothills, and valleys, inhabits broken oak woodland interspersed with grasslands or cultivated lands, open riparian woodland, oak savannah, and vacant city lots. Avoids areas with high strong winds, cold snowy winters, and very dry hot summers. Prefers tall trees in a linear arrangement, such as trees bordering streams, parklike groves, or orchards.

SPECIAL HABITAT REQUIREMENTS: Tall trees near open water for nesting.

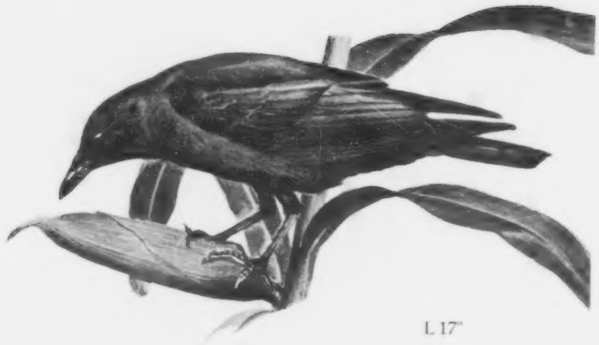
NEST: Believed to mate for life; breeds in small loose colonies, with each pair in a different tree. Prefers tall trees usually about 50 feet. Builds nest near the tree top on a small limb far out from the trunk, sometimes in a mistletoe clump. Occasionally reuses nest, but usually builds a new one each year. Locates nest in sycamore, oak, cottonwood, and digger pine.

FOOD: Consumes a diet of about half insects, especially grasshoppers, but also eats grains, acorns, cultivated and wild fruits, and carrion.

REFERENCES: Goodwin 1976, Kalmbach 1927, Linsdale 1937, Terres 1980, Verbeek 1973, Wilmore 1977.

American Crow

Corvus brachyrhynchos



L 17"

RANGE: Breeds from north-central British Columbia and southwestern Mackenzie to central Quebec and southern Newfoundland south to Baja California, central Arizona, southern New Mexico, central and southeastern Texas, the Gulf Coast, and southern Florida. Winters from southern Canada south throughout the breeding range.

STATUS: Common.

HABITAT: Most often inhabits open and semiopen habitats, favoring open deciduous, coniferous, and mixed forests, wooded river bottoms, groves, orchards, woodlands adjacent to agricultural land, suburban areas, parks, and woodlots.

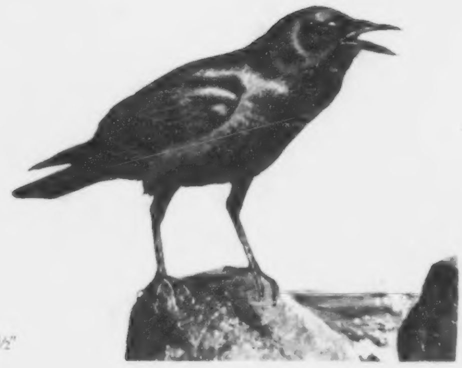
NEST: Builds a nest, a large platform of sticks, usually on a horizontal branch or in a crotch of a tree near the trunk, 10 to 75 feet above the ground. Prefers conifers and oaks as nest trees, but where trees are lacking, will build nests on the ground, on shrubs, or on telephone pole crossbars.

FOOD: Prefers to forage in cultivated fields. Has an omnivorous diet that is three-fourths vegetable foods, including cultivated grains, seeds, wild and cultivated fruits, and nuts. Also eats insects, millipedes, spiders, small crustaceans, small reptiles, frogs, small mammals, eggs and young of birds, and carrion.

REFERENCES: DeGraff et al. 1980, Goodwin 1976, Johnsgard 1979, Lehman in Farrand 1983b, Wilmore 1977.

Northwestern Crow

Corvus caurinus



L 14½"

RANGE: Resident along the Pacific Coast from south-coastal and southeastern Alaska south to the Puget Sound area in northwestern Washington.

STATUS: Common.

HABITAT: Occurs along the coast, rarely straying farther than a mile from tidal waters, where it inhabits saltwater beaches, towns, and the wooded shores of bays, especially where there are small coniferous trees.

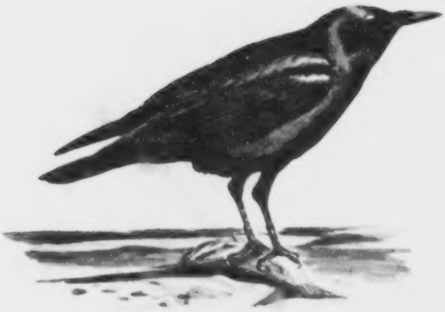
NEST: Nests in scattered pairs or in loose colonies, usually in a crotch of a low tree or bush 10 to 20 feet, but up to 70 feet, above the ground. Occasionally builds nest on the ground under overhanging boulders, under bushes or windfalls, on the side of a sandy bank, or in a hole in a cliff. Will locate nest in apple, hemlock, Douglas-fir, and spruce trees.

FOOD: Scavenges refuse from beaches, along with mollusks and other shellfishes. Forages for insects, especially grasshoppers, in nearby cultivated fields. Also eats crabs, mussels, dead fish and other carrion, eggs of other birds, and wild and cultivated fruits.

REFERENCES: Bent 1946, Goodwin 1976, Terres 1980, Wilmore 1977.

Fish Crow

Corvus ossifragus



RANGE: Resident from New York and Massachusetts south along the Atlantic Coast to southern Florida and west to southern Texas; inland along major river systems to southern Illinois and east-central Oklahoma.

STATUS: Locally common; range is extending northward and into drier regions.

HABITAT: Inhabits low coastal areas, especially wooded marine shorelines, coastal marshes and beaches, brackish bays, fertile farmlands up to 100 miles from the coast, inland wetlands, and forests near rivers and lakes. Occasionally occurs in pine forests, orchards, old dry fields, and abandoned farmlands overgrown with natural grasses and pines.

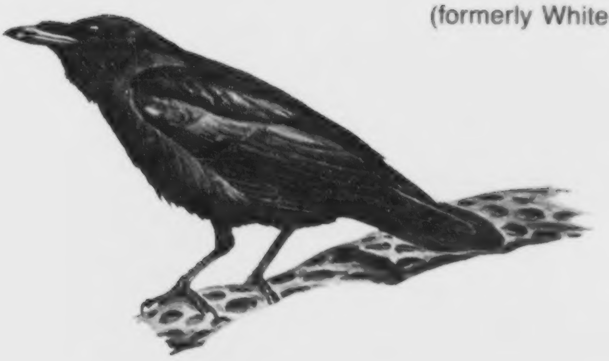
NEST: Nests singly or in loose colonies of 2 to 4 pairs, each nesting in a separate tree. Builds nest near the tops of trees, especially pines, usually 10 to 90 feet, but up to 150 feet, above the ground; rarely in tall shrubs. Usually locates nest near water in a large fork or on a horizontal limb close to the trunk.

FOOD: Gathers food from the ground or trees, most commonly from tidal flats, beaches, rookeries, and riverbanks. Eats a diet that includes crabs, shrimps, and other crustaceans; stranded and dead fish; insects; eggs and young of birds; small reptiles; wild fruits; cultivated grains; seeds; and carrion.

REFERENCES: DeGraff et al. 1980, Goodwin 1976, Johnsgard 1979, Wilmore 1977.

Chihuahuan Raven

Corvus cryptoleucus
(formerly White-necked Raven)



L 17½"

RANGE: Resident from south-central and southeastern Arizona, central and northeastern New Mexico, northeastern Colorado, and south-central Nebraska south to Mexico, and east to western Kansas and central Texas. (Northeastern populations, especially those in Nebraska and Kansas, migrate southward in winter.)

STATUS: Locally common.

HABITAT: Favors open, arid grasslands interspersed with yucca, mesquite, and cactus. Also occurs in deserts, on the open plains, and in arid farmlands, extending into the foothills. Outside the breeding season, often forms large flocks and roosts communally in canyons and gulches.

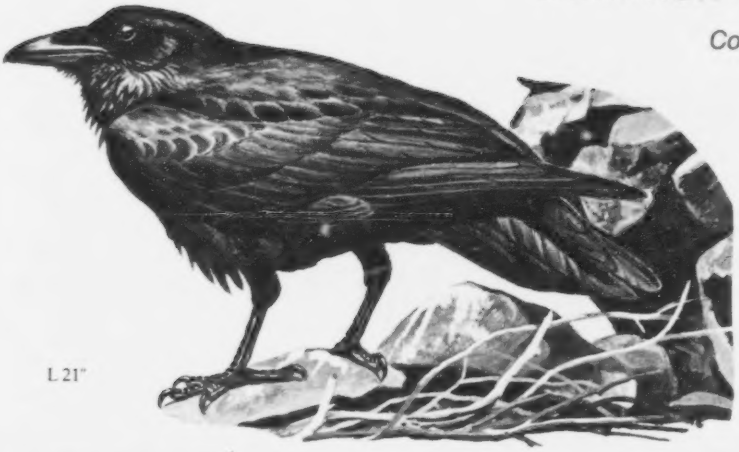
NEST: Usually builds nest in isolated trees or bushes, 4 to 40 feet above the ground; often uses same nest year after year. Uses sycamore, mesquite, willow, oak, yucca, cottonwood and other species for nest sites, but also nests on utility poles and windmill towers.

FOOD: Typically eats insects, especially grasshoppers and beetles, cultivated grains, small reptiles, fruits of cacti, carrion, eggs and young of birds, and scraps of human food.

REFERENCES: Bent 1946, Goodwin 1976, Johnsgard 1979, Terrill in Farrand 1983b, Wilmore 1977.

Common Raven

Corvus corax



RANGE: Resident from Alaska and northern Canada south through the western United States to Baja California and Mexico, and east to the eastern edge of the Rockies, western Oklahoma, and central Texas; east of the Rockies, south to central Saskatchewan, northern Wisconsin, southern Ontario, Vermont, and southeastern Maine; also locally in the Appalachians to northwestern Georgia.

STATUS: Common to locally common; reinvading its historic range and colonizing new areas.

HABITAT: Occurs in a wide variety of habitats but is most often found in open woodlands and mountainous and coastal regions. Inhabits rocky seacoasts, steep canyons, boreal forests, deserts, foothills, mountains, arctic tundra, and wooded marine islands. Tends to avoid extensive, dense forests.

SPECIAL HABITAT REQUIREMENTS: Cliff ledges or tall trees for nesting.

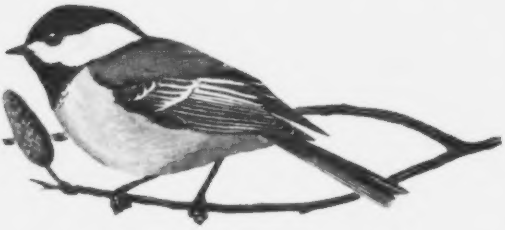
NEST: Usually builds nest high up in a tall coniferous tree or on a cliff ledge that is sheltered overhead and undercut or nearly vertical below. Generally selects locations inaccessible to humans and will sometimes use the same site in successive years.

FOOD: Scavenge for road kills along highways, and eats small mammals, reptiles, frogs, eggs, young and wounded birds, insects, mollusks, cultivated grains, mast, fruits, and other plant material. Eats all types of carrion, from small to large mammals to fishes.

REFERENCES: DeGraff et al. 1980, Goodwin 1976, Harlow et al. 1975, Hooper 1977, Johnsgard 1979, Knight and Call 1980, Terrill in Farrand 1983b, White and Cade 1971, Wilmore 1977.

Black-capped Chickadee

Parus atricapillus



L 4½"

RANGE: Resident from western and central Alaska, Saskatchewan, southern Quebec, and Newfoundland south to northwestern California, northeastern Nevada, central New Mexico, northeastern Oklahoma, central Indiana, and northern New Jersey, and in the Appalachians at higher elevations. Wanders irregularly south in winter.

STATUS: Common.

HABITAT: Prefers mixed woodlands but also inhabits deciduous and coniferous forests. Will inhabit dense woodlands to thickets, orchards, and urban areas, wherever suitable nesting cavities exist or can be excavated.

SPECIAL HABITAT REQUIREMENTS: Comparatively open sites near deep woods, and dead standing trees larger than 4 inches dbh for nesting and feeding.

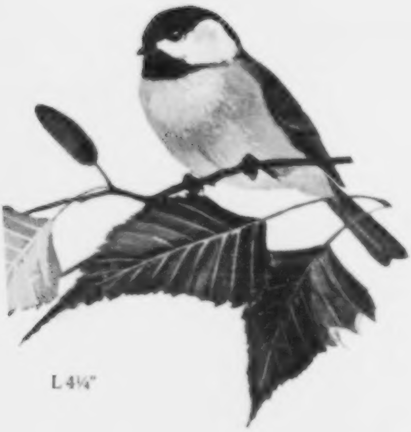
NEST: Usually excavates own nest holes in soft decayed wood of a dead tree or branch stub; will use existing cavities of other birds or bird houses. Prefers to nest in tree species that occur in early seral stages such as aspen, paper birch, yellow birch, willow, basswood, maple, and white ash. Favors trees adjacent to open areas in forest or edge situations for nest sites. Generally roosts in dense foliage rather than cavities.

FOOD: Forages from the ground to the tree tops for a variety of insects, conifer seeds, and fruits.

REFERENCES: Bailey and Niedrach 1965, Bent 1946, Brewer 1961, Forbush and May 1955, Johnsgard 1979, Martin et al. 1951, Odum 1941a, 1941b, 1942, Thomas et al. 1979.

Carolina Chickadee

Parus carolinensis



RANGE: Resident from southern Kansas, central Illinois, central Ohio, and central New Jersey south to central and southeastern Texas, the Gulf Coast and northern peninsular Florida. Wanders casually to the north and southward.

STATUS: Common.

HABITAT: Inhabits coniferous and deciduous woodlands; prefers forest and forest edge habitats similar to, but more moist and warm than, those preferred by the black-capped chickadee. Also frequents swamps, thickets, second-growth woodlands, parks, and brushy areas.

SPECIAL HABITAT REQUIREMENTS: Standing dead trees for excavating cavities.

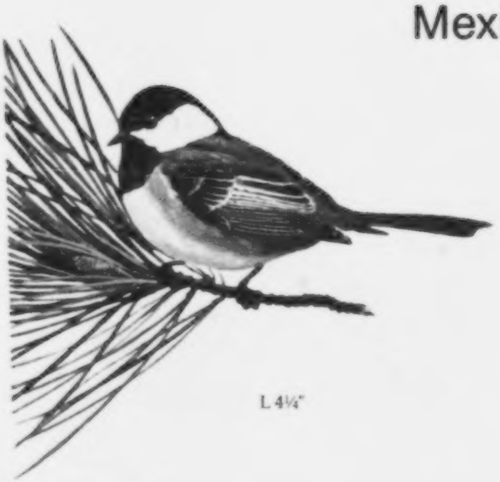
NEST: Usually excavates nest holes in dead, decayed tree trunks or in dead limbs of living trees. Occasionally nests in old woodpecker holes or natural cavities. (The nest and eggs of this species cannot be distinguished from those of the black-capped chickadee.) Chooses willow, pine, cottonwood, poplar, pear, and cherry for nest trees.

FOOD: Has very similar food habits to those of the black-capped chickadee.

REFERENCES: Bent 1946, Brewer 1961, 1963, Johnsgard 1979, Pitts 1976.

Mexican Chickadee

Parus sclateri



RANGE: Resident in Mexico, the Chiricahua Mountains of southeastern Arizona, and the Animas Mountains of southwestern New Mexico.

STATUS: Locally common.

HABITAT: Occurs in almost any habitat with conifers up to 7,000 to 8,000 feet in elevation, even where trees are sparse, but prefers pine-oak woodlands and montane pine and spruce-fir forests, primarily in mesic habitats. Outside the breeding season, may also be found in groves of Arizona cypress at lower elevations.

SPECIAL HABITAT REQUIREMENTS: Dead trees for cavity nest.

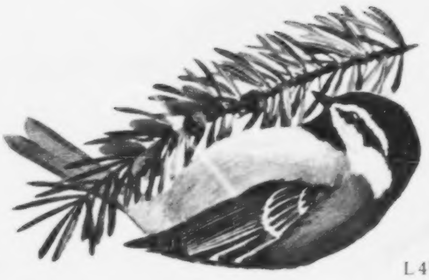
NEST: Excavates its own cavity in a dead stub, tree trunk, or branch.

FOOD: Probably eats insects and seeds similar to other chickadees. (No specific information is available on food habits).

REFERENCES: Bent 1946, Harrison 1979, Phillips et al. 1964, Terres 1980.

Mountain Chickadee

Parus gambeli



L 4¼"

RANGE: Resident from northwestern and central British Columbia, southwestern Alberta, western and south-central Montana, and Colorado south to Baja California, southern Nevada, central and southeastern Arizona, southern New Mexico, and extreme western Texas.

STATUS: Common.

HABITAT: Inhabits open coniferous forests from 6,000 to 11,000 feet in elevation. In winter, often ranges downslope to the foothills, frequenting oaks, and cottonwoods and willows along streams.

SPECIAL HABITAT REQUIREMENTS: Decayed trees or stubs for excavating nests, or old cavity nests.

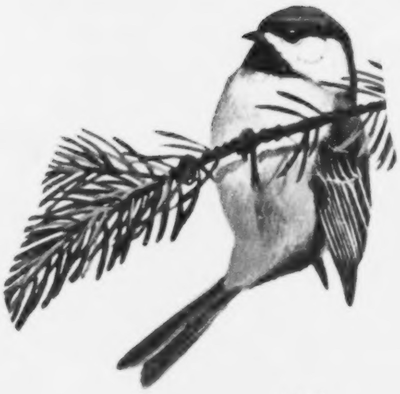
NEST: Usually nests in natural cavities or abandoned woodpecker holes, but will excavate its own holes in rotted wood. Many nest in aspen trees associated with a conifer forest.

FOOD: Gleans much of its food from foliage, especially large volumes of adult and larval insects. When densities of lodgepole needle miners are high, consumes these insects for much of its diet. Also eats seeds, spruce buds, and fruits.

REFERENCES: Bent 1946, DeWeese et al. 1979, Phillips et al. 1964, Scott et al. 1977, Telford and Herman 1963, Winternitz 1973.

Siberian Tit

Parus cinctus
(formerly Gray-headed Chickadee)



L 4¾"

RANGE: Resident from northern Alaska east across northern Yukon to northwestern Mackenzie, and south locally to western and central Alaska.

STATUS: Uncommon.

HABITAT: Inhabits spruce, willow, aspen, and birch stands along rivers at the northern limit of the boreal forest. During winter, wanders widely through river valleys.

SPECIAL HABITAT REQUIREMENTS: Natural cavities, abandoned woodpecker holes, or trees with soft, dead wood for nesting.

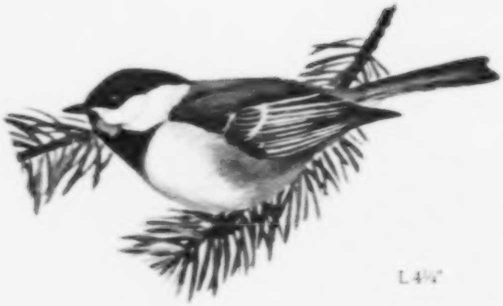
NEST: Builds nest inside an abandoned woodpecker hole or a natural cavity in a tree or stump; may excavate a cavity in trees with soft, dead wood.

FOOD: Eats adult, larvae, and eggs of insects in summer, and seeds of conifers and berries in winter.

REFERENCES: Bent 1946, Gibson in Farrand 1983b, Terres 1980.

Boreal Chickadee

Parus hudsonicus



RANGE: Resident from western and central Alaska and central Yukon to northern Ontario and Labrador, south to extreme north-central Washington, northwestern Montana, northern Minnesota, northern Michigan, northern New York, Maine, and Nova Scotia. After the breeding season, wanders irregularly to the south.

STATUS: Fairly common.

HABITAT: Associated with northern coniferous forests, where it inhabits spruce, balsam, and dense pine woodlands, white cedar and hemlock swamps, bogs, and occasionally birch and streamside willows.

SPECIAL HABITAT REQUIREMENTS: Available cavities, or decaying trees with soft heartwood and hard exterior layers and bark for excavating nest cavities.

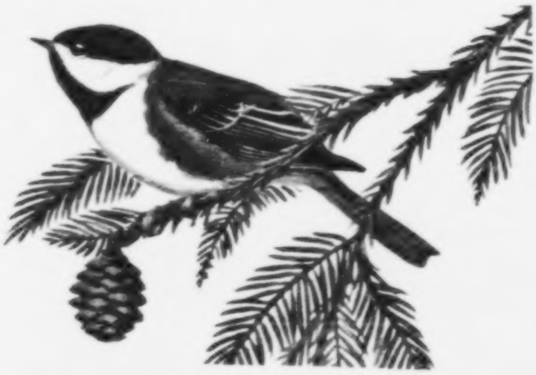
NEST: Excavates nest cavity in trees or stubs, preferably with soft and decayed heartwood but hard outer layers; it may use natural cavities or old woodpecker holes. Uses cavity opening from 1 to 10 feet above the ground, facing upward rather than laterally like the nests of other chickadees. Selects nest sites more for the softness of the heartwood than for the species of tree.

FOOD: Consumes adults, larvae, pupae, and eggs of insects found by gleaning and probing tree trunks, bark crevices, and foliage. Also extracts seeds from cones, and eats fruits.

REFERENCES: Bent 1946, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, McLaren 1975, Terres 1980.

Chestnut-backed Chickadee

Parus rufescens



L 4¾"

RANGE: Resident from south-central and southeastern Alaska, western British Columbia, northern Idaho, western Alberta, and northwestern Montana south through the coast ranges to southern California and through the Cascades and Sierra Nevadas to central California.

STATUS: Common; has extended its range in California in the past 20 years.

HABITAT: Prefers low-elevation, coastal, mesic coniferous forests of pines, cedar, tamarack, and hemlock. Also inhabits along streams and in adjacent deciduous woodlands.

SPECIAL HABITAT REQUIREMENTS: Available tree cavities or rotted snags suitable for nest excavation.

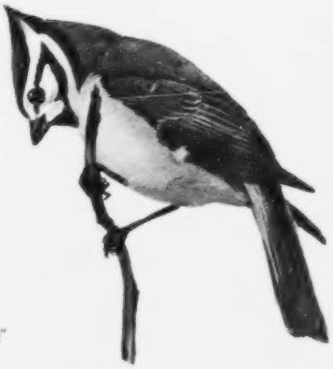
NEST: Builds nest in natural cavities, or abandoned woodpecker holes, or excavates cavities in soft, rotted tree stubs. Prefers pine, oak, and Douglas-fir snags.

FOOD: Gleans much of its food from tree trunks, but also from rotting logs on the ground. Primarily eats insects but also takes spiders, some fruit pulp, and conifer seeds.

REFERENCES: Beal 1907, Bent 1946, Grinnell and Miller 1944, Root 1964, Terres 1980.

Bridled Titmouse

Parus wollweberi



L 4½"

RANGE: Resident from central and southeastern Arizona and southwestern New Mexico, south locally to Mexico.

STATUS: Common.

HABITAT: Generally found in oak woodlands and pine-oak associations from 5,000 to 7,000 feet in elevation. In winter, may move down slope along streams where cottonwoods are present.

SPECIAL HABITAT REQUIREMENTS: Natural cavities in living or dead oaks.

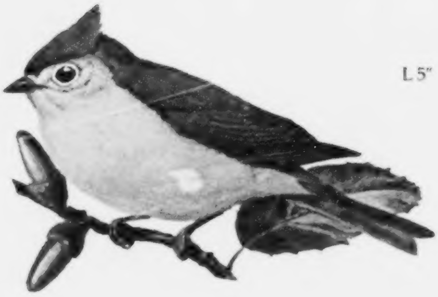
NEST: Usually builds nest in natural cavities of dead and living oak, but will also use cavities in cottonwood, willow, and mesquite.

FOOD: Spends much of its time foraging in crevices in bark, on tree trunks, and on branches, presumably for adults, larvae, and eggs of insects.

REFERENCES: Bent 1946, Phillips et al. 1964, Terres 1980.

Plain Titmouse

Parus inornatus



RANGE: Resident from southern Oregon, northeastern Nevada, southern Wyoming, and western Oklahoma, south to Baja California, central and southeastern Arizona, southern New Mexico, and extreme western Texas.

STATUS: Common.

HABITAT: In California, prefers oak woodlands; in the Great Basin and desert mountain ranges, occurs in pinyon-juniper woodlands. Greatest numbers inhabit evergreen trees in dry woodlands of the Southwest.

SPECIAL HABITAT REQUIREMENTS: Nest and roost cavities.

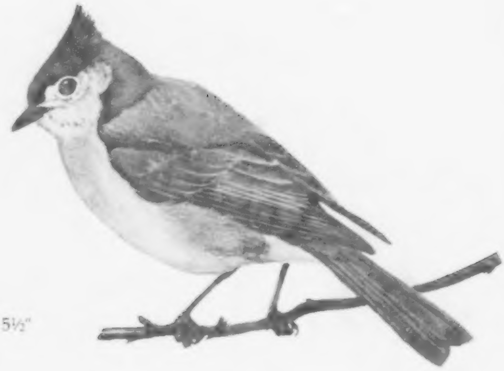
NEST: Usually builds nest in natural cavities or old woodpecker holes, primarily in oak trees; will also use nest boxes if available. Is capable of excavating its own cavity in rotted wood.

FOOD: Gleans much of its food, which is predominantly insects, from limbs, twigs, and from the ground. Also eats leaf galls, weed seeds, pinyon nuts, acorns, oats, and cherries.

REFERENCES: Bent 1946, Dixon 1949, Johnsgard 1979, Root 1964, Terres 1980, Wetmore 1964.

Tufted Titmouse

Parus bicolor


L 5½"

RANGE: Resident from northeastern Nebraska, central and eastern Iowa, southern Wisconsin, northern Ohio, southern Ontario, central New York, western Massachusetts, and southwestern Connecticut south to western Texas, the Gulf Coast, and southern Florida, and west to central Kansas, eastern Oklahoma and eastern Mexico.

STATUS: Common.

HABITAT: Associated with eastern coniferous and deciduous forests, where it prefers woodland swamps and river bottoms. Also occurs in orchards, low, rich woodlands, woodlots, city parks, and suburban areas.

SPECIAL HABITAT REQUIREMENTS: Natural cavities or woodpecker holes for nesting.

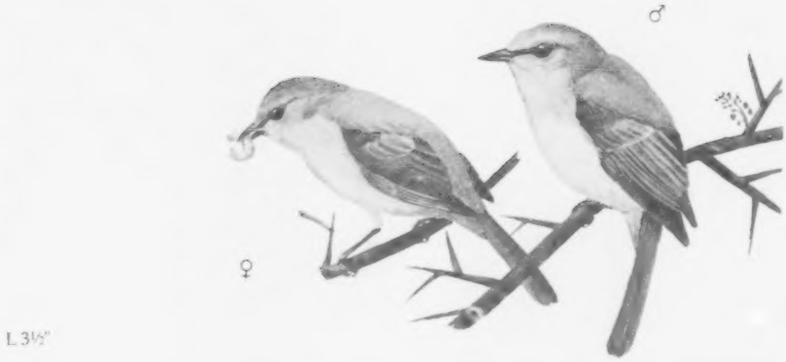
NEST: Usually nests in natural tree cavities or old woodpecker holes, generally 10 to 20 feet, but ranging from 3 to 90 feet, above the ground. Occasionally nests in bird boxes.

FOOD: Gleans food from branch and leaf surfaces during spring and summer and from branch surfaces and the ground in winter. Feeds primarily on insects, especially caterpillars; also eats snails; spiders; berries; seeds of sumac, yellow-poplar, alder, poison ivy, and bayberry; and some mast.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Gillespie 1930, Johnsgard 1979, Laskey 1957, Martin et al. 1951, Terres 1980.

Verdin

Auriparus flaviceps



RANGE: Resident from northeastern Baja California, southern California, southern Nevada, northern Arizona, southwestern Utah, central New Mexico, and central Texas south into Mexico. Casually in southwestern California and southwestern Oklahoma.

STATUS: Common.

HABITAT: Inhabits brushy valleys, oak slopes, and other semiarid habitats where there are stiff-twigged and thorny bushes, or trees such as mesquite, hackberry, hawthorn, catclaw, screw bean, paloverde, and cholla.

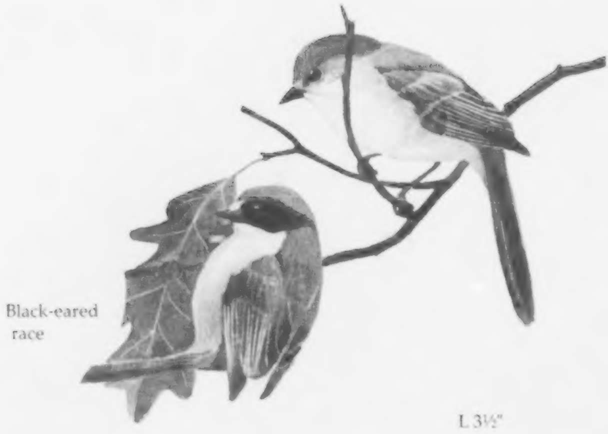
NEST: Builds a nest that is an oval or ball-shaped mass, up to 8 inches in diameter, of thorny twigs anchored to a limb of almost any tree or shrub species found within its range. Also builds roosting or winter nests.

FOOD: Eats mostly insects, searching among terminal twigs, buds, and under leaves for insects, their eggs and larvae. Also eats spiders; pulp from seed pods of paloverde, mesquite, and ironwood; and fruits of wolf berry and date palm.

REFERENCES: Johnsgard 1979, Taylor 1971, Terres 1980, Whitaker 1943.

Bushtit

Psaltriparus minimus



RANGE: Resident from extreme southwestern British Columbia, western Washington, western and southern Oregon, southwestern Idaho, northern Nevada, north-central Utah, southwestern Wyoming, north-central Colorado, western Oklahoma, and central Texas south to Baja California, central and southeastern Arizona, and Mexico.

STATUS: Locally common.

HABITAT: Found most frequently in pinyon-juniper habitats, but also occurs in tall sagebrush, mountain-mahogany, chaparral, brushy or tree-lined river banks, and in hillside aspen groves.

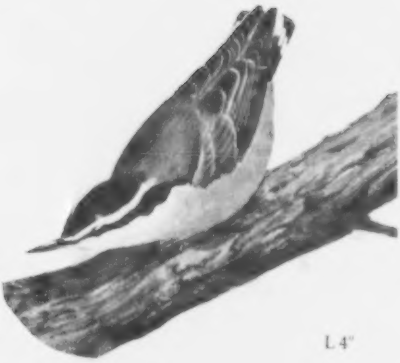
NEST: Builds a gourd-shaped nest of twigs, mosses, roots, lichens, oak leaves, and flowers, that is hung from a branch in a clump of leaves.

FOOD: Gleans insects and spiders from foliage of trees and shrubs; also eats some fruit.

REFERENCES: Addicott 1938, Johnsgard 1979, Terres 1980.

Red-breasted Nuthatch

Sitta canadensis



RANGE: Breeds from south-coastal and southeastern Alaska, southern Yukon, central Manitoba, and Newfoundland south to southern California, central and southeastern Arizona, central Colorado, Wyoming, southwestern North Dakota, southern Manitoba, southern Michigan, and north-central Ohio; in the Appalachian Mountains to eastern Tennessee and western North Carolina; and south to southeastern Pennsylvania, southern New Jersey, and southern New York. Winters throughout most of the breeding range except at the higher latitudes and elevations, irregularly south to Baja California, southern Arizona, southern Texas, and central Florida.

STATUS: Common.

HABITAT: Prefers coniferous forests, but sometimes occurs in mixed and deciduous woodlands.

SPECIAL HABITAT REQUIREMENTS: Cavities in trees with a minimum dbh of 12 inches for nest sites, or soft dead wood for cavity excavation.

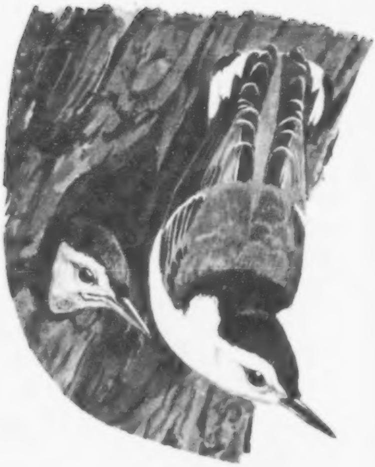
NEST: Generally uses natural cavities or woodpecker holes for nesting, but can excavate its own cavity in rotted stubs or dead branches. Typically locates nest 15 feet above the ground, but sometimes from 5 to 40 feet. Smears pitch below or around the entrance hole, even when the nest is in a deciduous tree or nest box.

FOOD: Pries open conifer cone scales and removes seeds for much of its food. Also feeds on spiders and some insects.

REFERENCES: Bent 1948, deKiriline 1952, Forbush and May 1955, Terres 1980, Thomas et al. 1979.

White-breasted Nuthatch

Sitta carolinensis



L 5"

RANGE: Resident from northwestern Washington, southern British Columbia, central Montana, southern Manitoba, northern Minnesota, northern Michigan, New Brunswick, and Nova Scotia south to Baja California, southern Nevada, central and southeastern Arizona, the highlands of Mexico, western and east-central Texas, and northern Florida. Absent from most of the Great Plains.

STATUS: Common.

HABITAT: Occurs primarily in deciduous and mixed forests, and locally in coniferous forests. Prefers open woodlands, pinyon-juniper, forest edges, parks, and partly open situations with scattered trees.

SPECIAL HABITAT REQUIREMENTS: Natural tree cavities for nesting, preferably in trees with a minimum of 12 inches dbh.

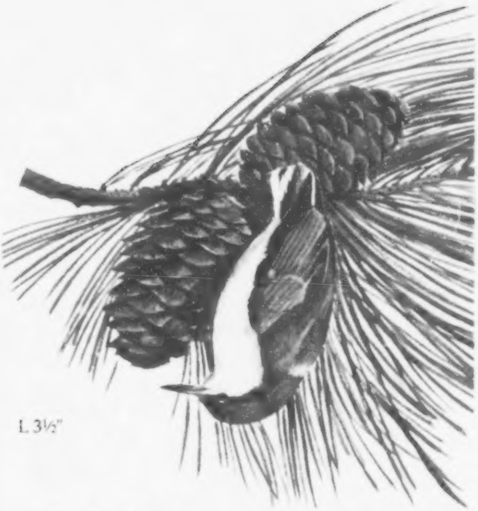
NEST: Prefers natural cavities in living trees at almost any height for nesting, but will use cavities in dead or dying trees or old woodpecker holes. Rarely, if ever, excavates its own cavity. Chooses apple, elm, maple, aspen, and ponderosa pine for nest trees.

FOOD: Gleans insects from the bark of tree trunks and limbs, but also searches for seeds on the ground. In fall and winter, primarily eats mast, sunflower seeds, and corn. During spring and summer, eats a myriad of arthropods.

REFERENCES: Bailey and Niedrach 1965, Bent 1948, DeGraff et al. 1980, Forbush and May 1955, Kilham 1968, Scott and Patton 1975, Thomas et al. 1979.

Pygmy Nuthatch

Sitta pygmaea



RANGE: Resident from southern interior British Columbia, northern Idaho, western Montana, central Wyoming, and southwestern South Dakota south to Baja California, Mexico, southern Nevada, central and southeastern Arizona, central New Mexico, western Texas, and western Oklahoma.

STATUS: Common.

HABITAT: Generally associated with pine forests; prefers open, parklike forests, especially among ponderosa pines in the lower coniferous forest zone. Occurs less frequently in pinyon-juniper and pines of the Pacific Coast.

SPECIAL HABITAT REQUIREMENTS: Pine forests with dead trees for cavity nest sites.

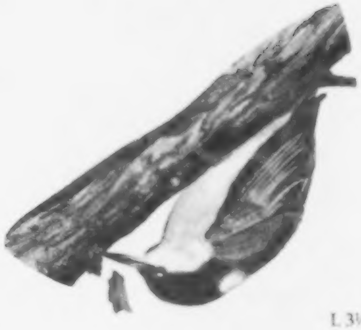
NEST: Usually excavates nest cavity near the top of a dead pine where the wood is well rotted, or in the underside of a dead branch about 5 to 60 feet above the ground, often at least 25 feet up. Occasionally nests in aspen snags.

FOOD: Searches for food in the tops of pine trees, consuming many insects and conifer seeds. Consumes a diet of about 80 percent insects and spiders.

REFERENCES: Bent 1948, Grinnell and Miller 1944, Johnsgard 1979, Norris 1958, Phillips et al. 1964, Scott et al. 1977.

Brown-headed Nuthatch

Sitta pusilla



L 3½"

RANGE: Resident from southeastern Oklahoma, central Arkansas, the northern portions of the Gulf States, northern Georgia, eastern Tennessee, western North Carolina, south-central and eastern Virginia, southern Maryland, and southern Delaware south to eastern Texas, the Gulf Coast, and southern Florida.

STATUS: Locally common to rare in parts of its range.

HABITAT: Prefers open pine or pine-hardwood woodlands, particularly burned-over areas or clearings where there are dead trees or old stumps. Virtually never found outside the coastal plain of the Southeast, or pine habitats.

SPECIAL HABITAT REQUIREMENTS: Dead trees or stumps for nest excavation.

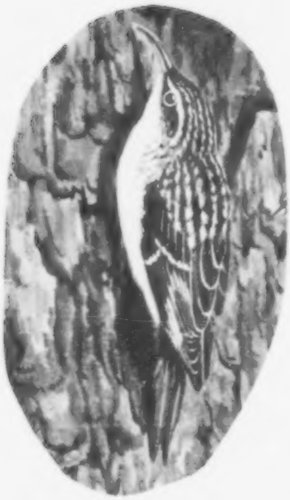
NEST: Excavates nest cavities in dead trees and stumps (often fire-blackened) or in posts or poles. Cavities are seldom over 13 feet high and usually less than 5 feet above the ground. Occasionally uses old woodpecker holes or natural cavities.

FOOD: Eats mainly insects in summer, foraging for food on tree branches and trunks. Mostly eats pine seeds in winter.

REFERENCES: Bent 1948, Norris 1958, Pearson 1936, Terres 1980.

Brown Creeper

Certhia americana



L 4¾"

RANGE: Breeds from southwestern, central, and southeastern Alaska, central Alberta, central Manitoba, and Newfoundland south to southern California, across to extreme western Texas, southeastern Nebraska, southeastern Missouri, southern Ontario, eastern Ohio, and West Virginia; in the Applachians to eastern Tennessee and western North Carolina; and to the lowlands of Virginia, Maryland and Delaware. Breeds also through Mexico into Central America. Winters generally through the breeding range, withdrawing from the higher latitudes and elevations and south throughout the eastern United States and southern Texas, the Gulf Coast, and central Florida.

STATUS: Inconspicuous, but locally common.

HABITAT: Inhabits dense coniferous, deciduous, and mixed woodlands, montane forests, and wooded swamps with standing dead trees with loose bark. During migration and in winter, occurs in open woodlands, scrub forests, parks, and suburban trees.

SPECIAL HABITAT REQUIREMENTS: Dead trees with loose bark, preferably with a minimum dbh of 10 inches.

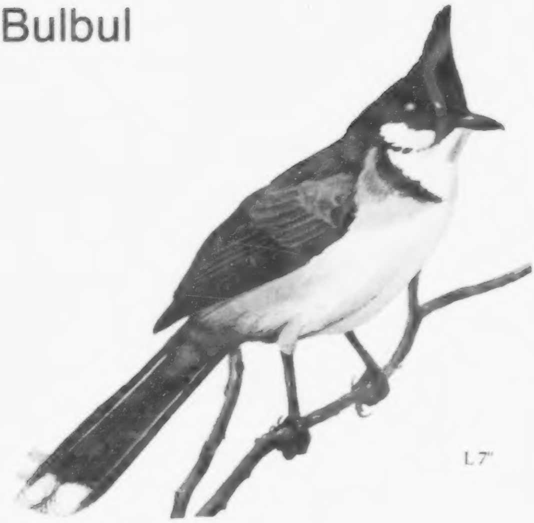
NEST: Constructs nest between loose bark and the trunk of a live, dead, or dying tree, generally 5 to 15 feet above the ground. Occasionally nests in natural cavities or old woodpecker holes.

FOOD: Explores tree trunks and branches for insects and larvae. Also eats a small amount of mast.

REFERENCES: Bent 1948, Davis 1978, DeGraff et al. 1980, Johnsgard 1979, Terres 1980, Thomas et al. 1979.

Red-whiskered Bulbul

Pycnonotus jocosus



RANGE: Introduced in 1960 and established in Dade County, southern Florida. Native to India and southern China.

STATUS: Locally common; there are no apparent ecological factors to hinder the spread of this species along coastal, tropical, southeastern Florida.

HABITAT: Has adapted well to exotic trees and shrubs in large suburban yards around Kendall, Florida. Generally stays under cover of vegetation, but occasionally perches in the open. Flocks together in the nonbreeding season and begins roosting assemblages in July and August.

SPECIAL HABITAT REQUIREMENTS: Ornamental trees and shrubs old enough to bear berries and fruits for food.

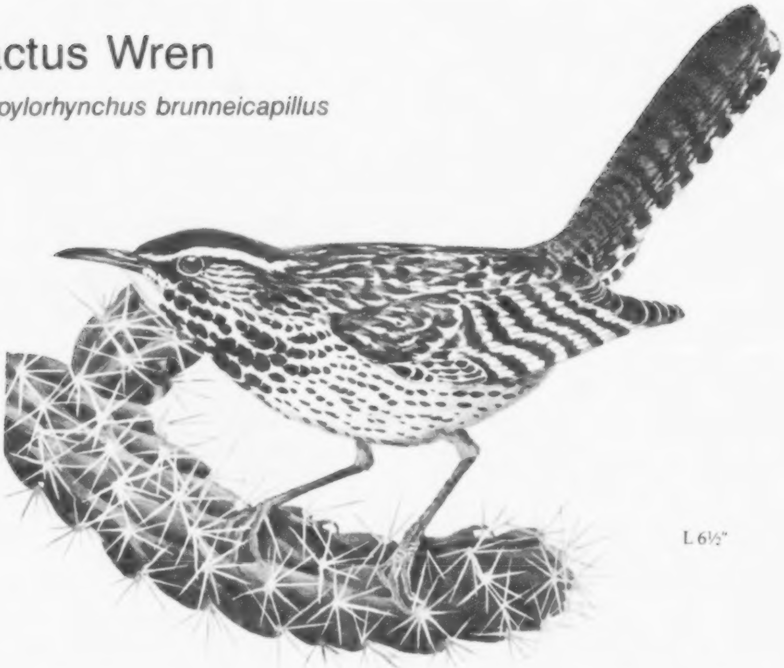
NEST: Currently nests only within suburbs, using virtually any shrub, hedge, or small tree. Builds nest in the crotch of a low shrub or small tree 2 to 8 feet above the ground.

FOOD: Eats fruits, berries, flowers, nectar, and some insects. The fruit of the Brazil peppertree is a very important food item during winter months.

REFERENCES: Carleton and Owre 1975, Fisk 1966, Sykes in Farrand 1983b.

Cactus Wren

Campylorhynchus brunneicapillus



RANGE: Resident from southern California, southern Nevada, southwestern Utah, and central Arizona to central and southern Texas south to Mexico.

STATUS: Common.

HABITAT: Inhabits southwestern deserts, primarily where there are abundant cacti and thorny trees, especially large cholla, mesquite, and paloverde. Also frequents riparian brush and trees in towns of arid regions.

SPECIAL HABITAT REQUIREMENTS: Thorny shrubs or trees for nesting sites.

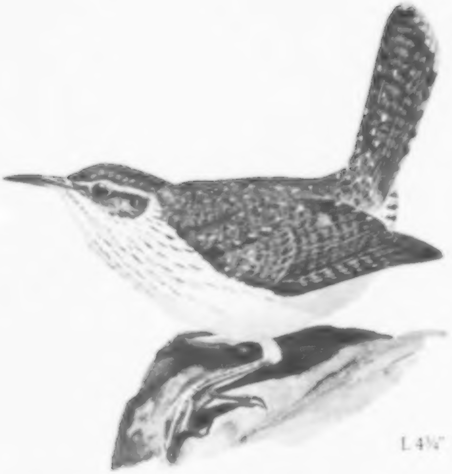
NEST: Usually constructs a conspicuous nest in cholla cactus, catclaw, or other thorny shrubs or trees, from 3 to 14 feet, but typically 4 to 9 feet, above the ground. Occasionally may nest in orange trees, old woodpecker holes, or in a hollow cornice of a building. Covered roosting nests are built for use throughout the year.

FOOD: Feeds mostly on the ground, but also gleans insects from branches of trees and shrubs. Consumes insects, some spiders, occasionally lizards and tree frogs, cactus fruit, berries, and some seeds.

REFERENCES: Anderson and Anderson 1959, 1973, Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983b.

Rock Wren

Salpinctes obsoletus



RANGE: Breeds from south-central British Columbia and southern Alberta to the western Dakotas south (east of the coast ranges in Washington, Oregon and northern California) to Baja California and Central America, and east to western Nebraska and central and southern Texas. Winters from northern California, southern Nevada, and southern Utah to north-central Texas south through the southern portions of the breeding range, wandering to lower elevations.

STATUS: Fairly common.

HABITAT: Primarily inhabits arid and semiarid environments, preferring open, rocky areas such as rock outcrops, canyons, fractured cliff faces, talus slopes, and dry earth banks. May be found up to 10,000 feet in the Rocky Mountains and shows no preference for areas with water throughout its range.

SPECIAL HABITAT REQUIREMENTS: Rough, rocky surfaces with crevices for foraging and cover.

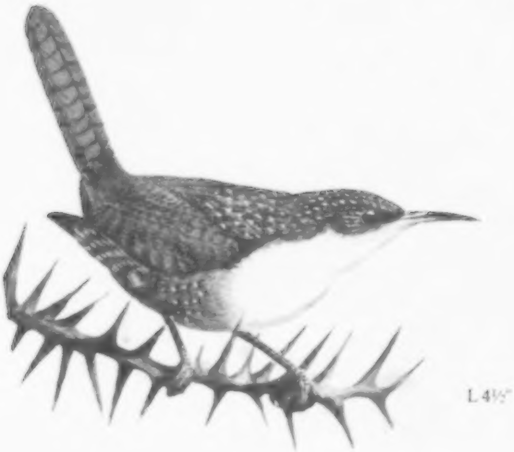
NEST: Typically locates nest on slopes of loose rocks and boulders, in crevices of canyon walls, or sometimes in rodent cavities in banks or in tree holes. Builds a well hidden nest, often with a small runway of stones, sometimes 8 to 10 inches long, leading to the nest.

FOOD: Forages almost exclusively in open or relatively unvegetated sites. Gleans insects and spiders from boulders, rocks, barren ground, and crevices.

REFERENCES: Bent 1948, Johnsgard 1979, Verner and Boss 1980, Webster in Farrand 1983b.

Canyon Wren

Catherpes mexicanus



RANGE: Resident from southern interior British Columbia and eastern Washington to Wyoming, southeastern Montana, and southwestern South Dakota south to Baja California and Mexico.

STATUS: Fairly common.

HABITAT: Found in two primary habitats; areas with water, such as boulder-strewn streams, rocky canyons, and river gorges, and major rock formations, such as tall cliffs, large caves, mesas, and buttes. Prefers cool, shaded canyons with rock outcrops.

SPECIAL HABITAT REQUIREMENTS: Small cliffs, talus, or rock outcrops for nesting and foraging.

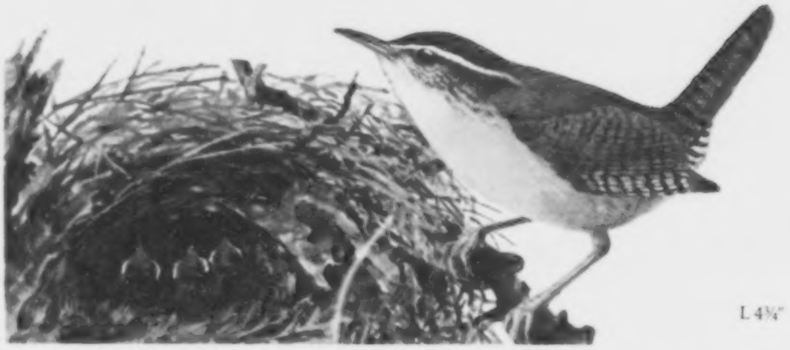
NEST: Favors ledges in caverns or rocky crevices for nest sites but sometimes attaches nest to a rock face in a cave or wide crevice. May also nest in buildings.

FOOD: Forages mainly in secluded or covered habitats, gleaning insects and spiders from rock surfaces or the ground.

REFERENCES: Bent 1948, Johnsgard 1979, Verner and Boss 1980, Webster in Farrand 1983b.

Carolina Wren

Thryothorus ludovicianus



RANGE: Resident from eastern Nebraska, Iowa, and southeastern Minnesota across to southern Ontario, extreme southwestern Quebec, and southern New England, south to Mexico, the Gulf Coast, and Florida.

STATUS: Common; populations are beginning to recover in the northern portion of its range where they had previously declined.

HABITAT: Found in a variety of habitats from lowland streambank tangles to upland brushy slopes and woodland edges, especially in moist areas with thickets and undergrowth such as honeysuckle, greenbrier, and brush piles. Also frequents cutover forests, cultivated areas with brush heaps or old buildings, and suburban parks and gardens. In winter, moves to low, flat ground near tidewater creeks in the Northeast, and to narrow valleys and deep ravines in other areas.

SPECIAL HABITAT REQUIREMENTS: Low, brushy vegetation.

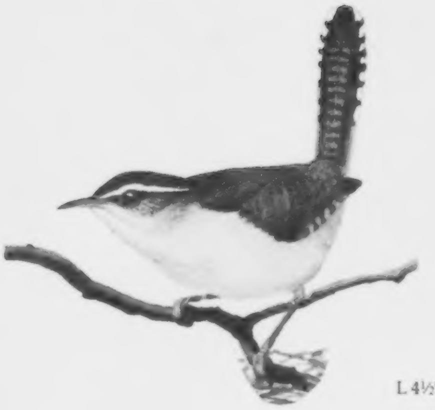
NEST: Prefers nest sites that are fairly well enclosed. Typically nests in natural tree cavities, woodpecker holes, overturned root cavities, birdhouses, under rocks, and in building crevices. Locates nest usually less than 10 feet above the ground, sometimes in low shrubs or in grasses.

FOOD: Consumes a diet that is about 94 percent animal food, nearly all insects gleaned from trees, shrubs, and the ground. Also eats some snails, lizards, tree frogs, berries, and seeds. Will come to bird feeders for food.

REFERENCES: Armistead in Farrand 1983b, Bent 1948, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Nice and Thomas 1948, Scott et al. 1977, Tate and Tate 1982.

Bewick's Wren

Thryomanes bewickii



RANGE: Breeds from southwestern British Columbia, southern Wyoming, eastern Nebraska, southeastern Minnesota, southern Ontario, and southeastern New York south to Mexico, central Texas, the northern portions of the Gulf States, central Georgia and central South Carolina. Resident in the West; winters from the northern limits of the breeding range, southern Kansas, the lower Ohio Valley, and North Carolina to Mexico, the Gulf Coast, and central Florida.

STATUS: Scarce and local throughout the eastern portion of the breeding range, locally common in the West.

HABITAT: Generally associated with dense, brushy habitats such as thickets of mesquite, oaks, and cacti; chaparral; mixtures of pine, junipers, and oaks; dense growths of alder, cottonwood, and willow. In the Southwest, occurs in mountain canyons up to 6,000 feet in elevation.

SPECIAL HABITAT REQUIREMENTS: A brushy understory and cavities for nesting.

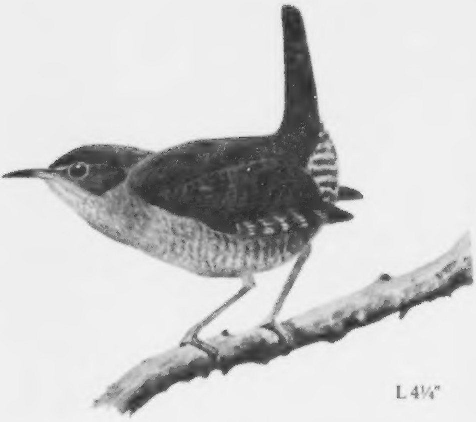
NEST: Nests near the ground in secluded natural tree cavities, old woodpecker holes, rock crevices, deserted buildings, birdhouses, or in almost any cavity where a nest could be built. (Nest and nesting sites are like those of the house wren, and the two species usually compete when in the same area.)

FOOD: Gleans small insects and spiders (about 97 percent of diet) from low trunks and branches of trees and brush, usually under dense cover.

REFERENCES: Beal 1907, Bent 1948, Johnsgard 1979, Miller 1941, Tate and Tate 1982, Verner and Boss 1980.

House Wren

Troglodytes aedon



RANGE: Breeds from southern and east-central British Columbia and northern Alberta east to southwestern Quebec and New Brunswick, and south to Baja California, Mexico, western and northern Texas, central Arkansas, southern Tennessee, and North Carolina. Winters from southern California to northern Texas, the northern portion of the Gulf States, and coastal Maryland south to Mexico, the Gulf Coast, and Florida.

STATUS: Common.

HABITAT: Originally associated with deciduous forests and open woods, it has adapted to woody vegetation in cities, towns, and around farms. Frequents edges of woodlands, open forests, clearings, swampy woodlands, orchards, farmlands, and suburban gardens. Ranges from the plains up to near timberline in the West but avoids high elevations in the East.

SPECIAL HABITAT REQUIREMENTS: Woody vegetation and cavities for nesting.

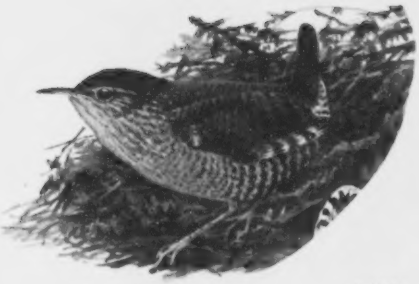
NEST: Uses almost any type of cavity as a nest site, including natural cavities in trees, fenceposts, or stumps, woodpecker holes, and birdhouses or other artificial cavities with openings preferably about 1 inch in diameter. Typically chooses a nest site less than 10 feet above the ground.

FOOD: Gleans and hawks insects, which form 98 percent of its diet.

REFERENCES: Bent 1948, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Kendeigh 1941.

Winter Wren

Troglodytes troglodytes



L 3¼"

RANGE: Breeds from coastal southern and southeastern Alaska and northern British Columbia to central Quebec and southern Labrador, south to central California, central Idaho, southeastern Manitoba, southern Wisconsin, and southeastern New York, and in the Appalachians to northeastern Georgia. Winters from southern Alaska and British Columbia east to northeast Colorado, central Iowa, southern Michigan, and Massachusetts south to southern California, southern Texas, the Gulf Coast, and central Florida.

STATUS: Generally uncommon.

HABITAT: Primarily inhabits dense undergrowth of coniferous forests, generally near water. Favors spruce and fir forests, but sometimes inhabits dense mixed and hardwood forests. Frequents thickets near woodland streams, boreal swamps and bogs, banks of marshy ditches, and slash piles. In winter, prefers coniferous and deciduous woodlands with a dense understory, especially in moist areas.

SPECIAL HABITAT REQUIREMENTS: Moist coniferous woodlands with low woody vegetation, or low-lying cold bogs or swamps.

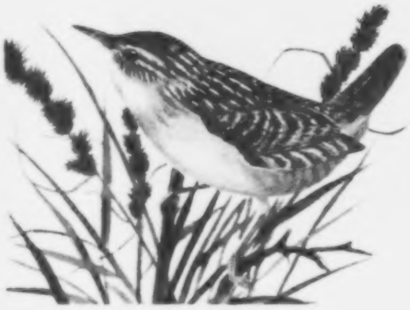
NEST: Usually nests under an upturned root of a tree or under a stump, in a hollow log, brush heap or rocky crevice, or rarely in an old woodpecker hole. Does not typically build its nest in an enclosed cavity as other wrens do.

FOOD: Insects and spiders gleaned from the ground form almost the entire diet.

REFERENCES: Bent 1948, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979.

Sedge Wren

Cistothorus platensis
(formerly Short-billed Marsh Wren)



L 3¾"

RANGE: Breeds from extreme east-central Alberta and central Saskatchewan east to northern Michigan and southern New Brunswick, south to east-central Arkansas, central Kentucky, and southeastern Virginia, and west to central North Dakota and eastern Kansas. Winters from western Tennessee and Maryland to northeastern Mexico, Texas, the Gulf Coast, and Florida.

STATUS: Scarce and local; populations are declining in the Northeast and Midwest.

HABITAT: Inhabits wet meadows and the damp upper margins of marshes and sphagnum bogs. In the Northeast, commonly inhabits sedge meadows, shallow sedge marshes with scattered shrubs and little or no standing water, and coastal brackish marshes of marsh hay cordgrass with scattered low shrubs and herbs. In the Midwest, prefers wet meadows dominated by sedges, cottongrass, mannagrass, and reed grass, but also frequents emergent vegetation associated with marshes, and retired croplands and fields.

SPECIAL HABITAT REQUIREMENTS: Wet meadows or drier edges of marshes for nesting.

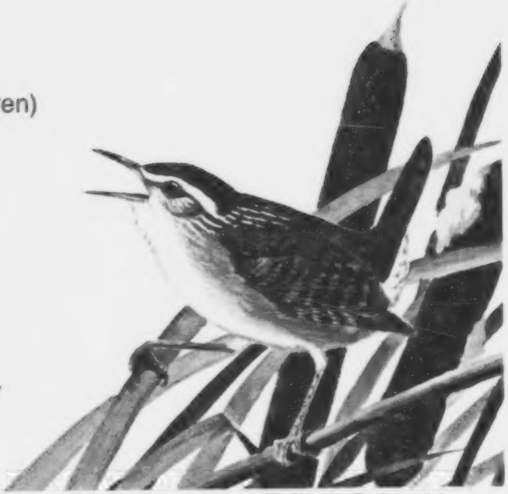
NEST: May be loosely colonial in good habitat, otherwise nests singly. Builds nest over land or water in dense vegetation such as canarygrass, sedges, or bulrushes, but shuns cattails; usually places nest 1 to 3 feet above the substrate. Males build many unlined dummy nests, but few are used by females.

FOOD: Gleans insects and spiders from the ground and surrounding marsh vegetation.

REFERENCES: Crawford 1977, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Mousley 1934b, Tate and Tate 1982, Vickery in Farrand 1983b, Walkinshaw 1935.

Marsh Wren

Cistothorus palustris
(formerly Long-billed Marsh Wren)



L 4"

RANGE: Breeds from southwestern and east-central British Columbia and northern Alberta east to northern Michigan and eastern New Brunswick, south to Baja California, southwestern Arizona, extreme western and southern Texas, the Gulf Coast, and east-central Florida. Generally very local in interior North America. Winters in coastal areas throughout the breeding range, and in the interior from the southern United States to Mexico.

STATUS: Locally common.

HABITAT: Prefers large fresh or brackish marshes with an abundance of tall emergent vegetation such as cattails, loosestrife, sedges, or rushes. Also frequents prairie sloughs, pond and sluggish river shores, marsh-fringed lakes, and the banks of tidal rivers bordered with tall emergent vegetation. Prefers large marshes grown with narrow-leaved cattails to those with broad-leaved cattails.

SPECIAL HABITAT REQUIREMENTS: Marshy habitats with tall emergent vegetation.

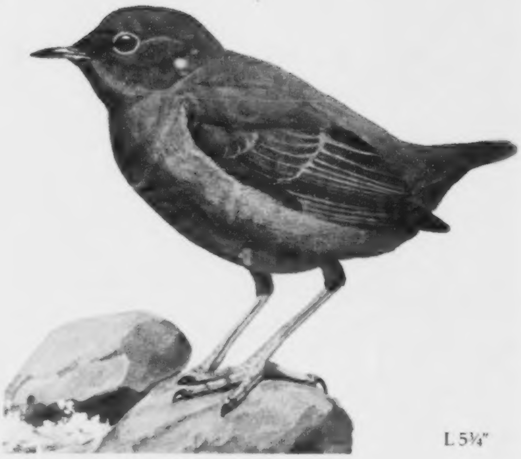
NEST: Builds domed elliptical nest preferably in cattail stands of moderate density, 3 to 5 feet above the marsh substrate, which is generally shallow water. Usually attaches to cattails or other tall emergent vegetation, but may place it in small bushes or trees. Constructs many dummy nests and uses some for roosting.

FOOD: Gleans insects and spiders from surrounding marsh vegetation and the surface of the water; also hawks for insects and eats a few snails.

REFERENCES: Bent 1948, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Low and Mansell 1983, Verner 1965, Verner and Engelsen 1970, Vickery in Farrand 1983b, Welter 1935.

American Dipper

Cinclus mexicanus
(formerly Dipper)



L 5¾"

RANGE: Resident from western and northeastern Alaska and north-central Yukon to southwestern Alberta, north-central Montana, and southwestern South Dakota south to southern California, north-central and southeastern Arizona, southern New Mexico, Mexico, and Central Mexico.

STATUS: Fairly common.

HABITAT: Found along rapidly flowing mountain streams in the West, with numerous falls and cascades, and beds filled with large rocks and boulders. Primarily in the vicinity of coniferous forests from 2,000 feet to timberline; less frequently found in the vicinity of mountain ponds and lakes.

SPECIAL HABITAT REQUIREMENTS: Clear, permanent streams or rivers.

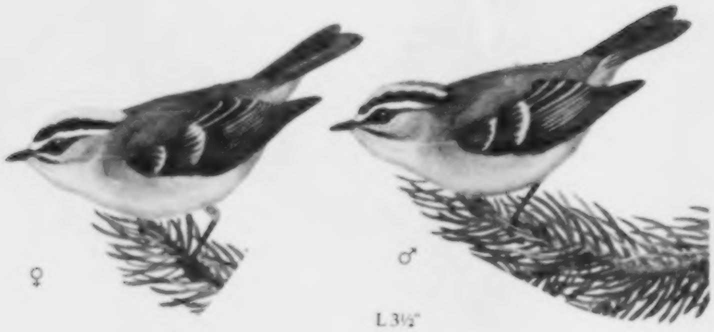
NEST: Usually locates nest over water, either under overhanging rock ledges or under bridges, from just above water level to 15 feet high. Places nest on a rock in midstream, behind a waterfall, or more commonly, in a niche in a rock wall, or sometimes among the roots of a fallen tree.

FOOD: Eats mainly insect larvae and adults, snails, and fish fry. Searches for food while completely submerged under fast-flowing water. Catches some insects in the air by hawking.

REFERENCES: Bakus 1959, Hann 1950, Johnsgard 1979, Thut 1970.

Golden-crowned Kinglet

Regulus satrapa



RANGE: Breeds from southern Alaska to northern Alberta, southern Quebec, and Newfoundland south in the coastal and interior mountains to southern and eastern California, southern Utah, south-central New Mexico, Mexico, Guatemala, and east of the Rockies to southern Manitoba, north-central Michigan, New York, eastern Tennessee, western North Carolina, northern New Jersey, and southern Maine. Winters from south-coastal Alaska and southern Canada south to northern Baja California, through the breeding range to Guatemala, the Gulf Coast, and central Florida.

STATUS: Common in parts of its range; has declined in western regions.

HABITAT: Breeds primarily in dense coniferous forests, especially where spruce is present. Winters in coniferous forests and occasionally in deciduous woodland scrub and brush.

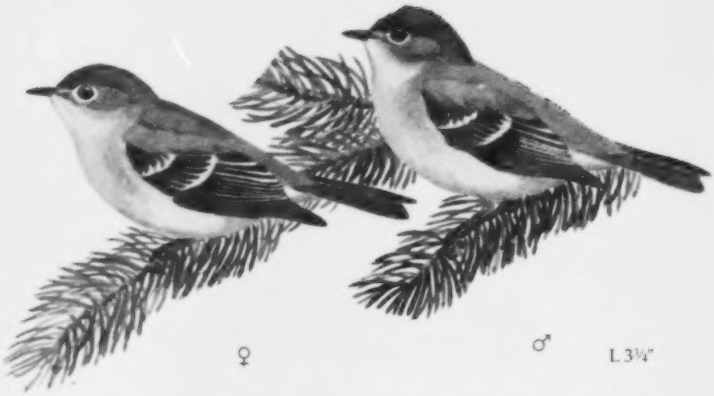
NEST: Builds a globular nest with entrance at the top, woven into the twigs of a horizontal limb of a conifer.

FOOD: Forages over leaves, branches, and trunks, feeding almost entirely on insects and their eggs (bark beetles, scale insects) and especially plant lice. In summer, feeds mainly on flying insects.

REFERENCES: Bent 1949, DeGraff et al. 1980, Forbush and May 1955, Tate and Tate 1982, Terres 1980.

Ruby-crowned Kinglet

Regulus calendula



RANGE: Breeds from northwestern and north-central Alaska, northern Saskatchewan, northern Ontario, and Newfoundland south to southern Alaska, in the mountains to southern California, southern Arizona, south-central New Mexico, and east-central Colorado, and east of the Rockies to central Alberta, southern Manitoba, northeastern Minnesota, northern Michigan, northern New York, northern Maine, and Nova Scotia. Winters from southern British Columbia, Idaho, northern Arizona, Nebraska, southern Ontario, and New Jersey south to Baja California, southern Texas, southern Florida, and through Mexico to Guatemala.

STATUS: Locally common.

HABITAT: Generally inhabits coniferous forests or coniferous-deciduous woodlands during the summer breeding season. In migration and during winter also found in deciduous forests, open woodlands, brush, and scrub.

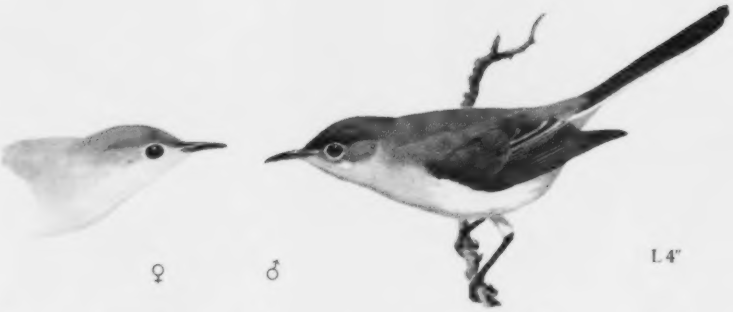
NEST: Usually attaches nest to pendent twigs beneath a horizontal spruce branch (occasionally fir or pine), generally from 15 to 60 feet above the ground.

FOOD: Gleans or hawks its food, which consists mainly of insects and spiders. Also eats some elderberries and weed seeds.

REFERENCES: Beal and McAtee 1912, DeGraff et al. 1980, Forbush and May 1955, Terres 1980.

Blue-gray Gnatcatcher

Polioptila caerulea



RANGE: Breeds from southern Oregon, northern California, southern Idaho, central Utah, Colorado, Nebraska, western Iowa, southeastern Minnesota, Michigan, southwestern Quebec, central New York, central Vermont and southern Maine south to Baja California, to southeastern Texas, the Gulf Coast, and southern Florida, throughout Mexico to Central America. Winters from southern California, southern Nevada, western and central Arizona, central Texas, the southern portions of the Gulf States, and on the Atlantic Coast from Virginia south through Mexico to Central America.

STATUS: Common in parts of its range, but numbers fluctuate.

HABITAT: In the Southeast, it inhabits forested river bottoms and upland pine woods with an understory of oaks. In other areas, it may inhabit open scrub and woodlands, or tall trees of closed canopy along river flood plains. Throughout the West it breeds in oaks, pinyon-juniper, and less frequently in chaparral.

SPECIAL HABITAT REQUIREMENTS: An abundant supply of arthropods.

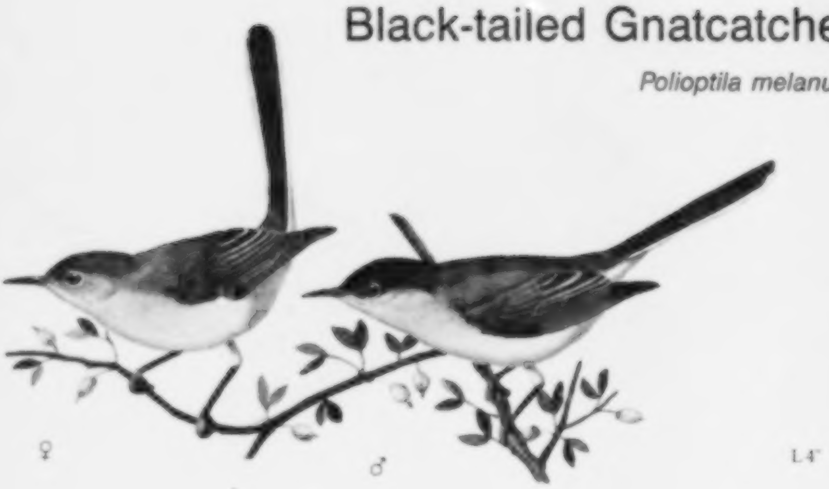
NEST: Places nest saddled on a horizontal limb 4 to 70 feet high (average 25 feet), in a conifer or deciduous tree, but usually in deciduous oaks.

FOOD: Gleans food from the tips of branches, leaf surfaces, and bark; also hawkes flying insects from perches. Mostly eats arthropods, principally insects, and some spiders.

REFERENCES: Forbush and May 1955, Root 1967, 1969, Terres 1980.

Black-tailed Gnatcatcher

Polioptila melanura



RANGE: Resident from southwestern California and northwestern Baja California south locally to southern Baja California and from northwestern Baja California, southeastern California, southern Nevada, western and central Arizona, southern New Mexico, and western and southern Texas south into Mexico.

STATUS: Common, but may be declining. Listed on the blue list for declining species in 1982.

HABITAT: Found in the lower elevations of the Southwest, where it prefers desert brush and scrub, especially mesquite and creosote bush, and in coastal sagebrush and thorn forests.

NEST: Places its small, deep cup, invariably low (2-4 feet above ground) in buckthorn, laurel, sumac, sagebrush, cactus, or other desert plant.

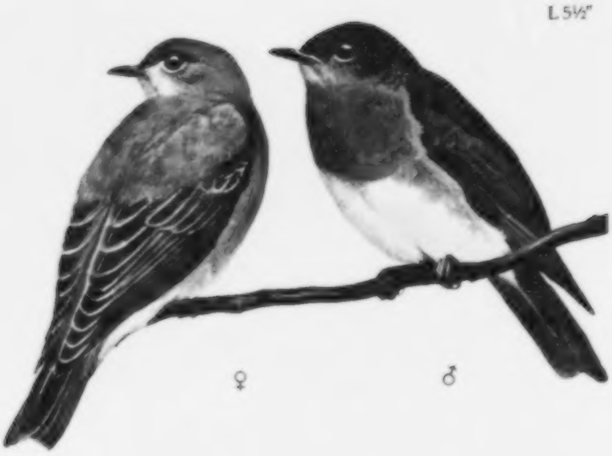
FOOD: Gleans insects and some spiders from branches and twigs of shrubs. Also eats small amounts of seeds.

REFERENCES: Harrison 1979, Tate and Tate 1982, Terres 1980, Terrill in Farrand 1983c.

Eastern Bluebird

Sialia sialis

L 5½″



RANGE: Breeds from southern Saskatchewan, southern Quebec, and western Nova Scotia south to southern Texas and southern Florida, and west to the Dakotas, western Kansas, Texas, and southeastern New Mexico; also in southeastern Arizona and through the highlands of Mexico to Central America. Winters from the middle portions of the eastern United States south throughout the breeding range.

STATUS: Population low but stable, many dependent on nest boxes.

HABITAT: Inhabits fields, forest edges, open woodlands, and open country with scattered trees, and in coniferous, deciduous, and riparian woodlands.

SPECIAL HABITAT REQUIREMENTS: Low cavities for nesting and perches for foraging.

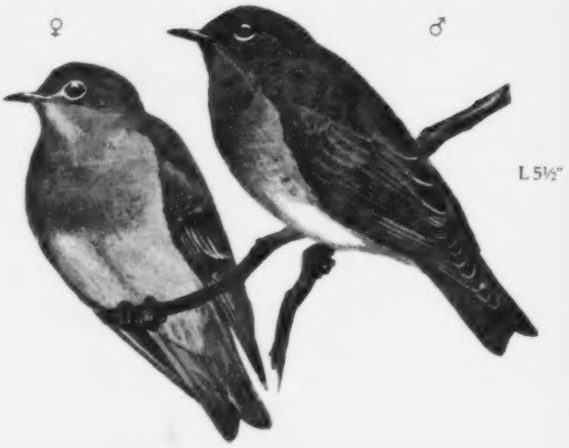
NEST: Nests in old woodpecker holes, hollows of decayed trees, crevices of rocks, and hollows in wooden fence posts when available. Many now nest in artificial nest boxes placed in open areas or at the edge of a forest.

FOOD: Catches insects and spiders by flying from a perch to the ground or hawking. Eats fruits and a few seeds during winter.

REFERENCES: Beal 1915a, Forbush and May 1955, Hartshorne 1962, Pearson 1936, Rustad 1972, Tate and Tate 1982, Thomas 1946.

Western Bluebird

Sialia mexicana



RANGE: Resident from southern British Columbia, western and south-central Montana, and north-central Colorado south through the mountains to Baja California, western and southern Nevada, southern Utah, western and southeastern Arizona, central New Mexico, western Texas, and in the highlands of Mexico. Wanders in winter to lowland areas throughout the breeding range, and to islands off California and Baja California.

STATUS: Overall population is low but stable.

HABITAT: Mostly inhabits open ponderosa pine forests of the transition zone but is also found in other open coniferous, deciduous, and mixed forests, partly open country with scattered trees, savannah, and riparian woodlands.

SPECIAL HABITAT REQUIREMENTS: Cavities for nesting and perches for feeding.

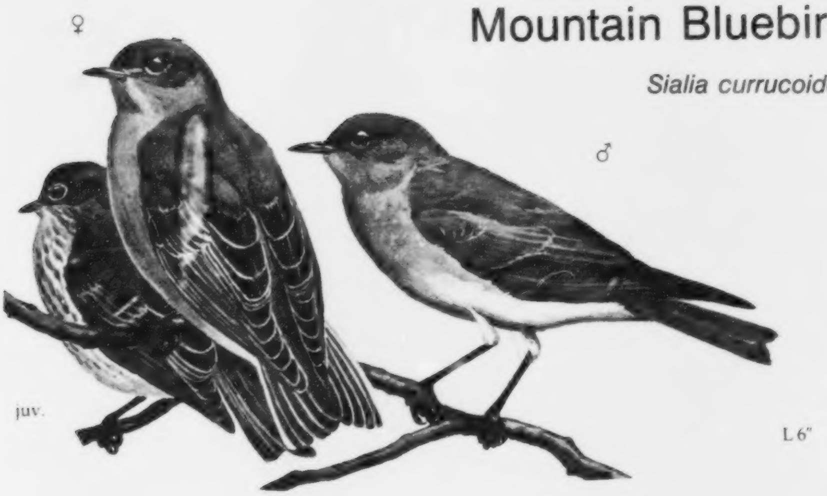
NEST: Usually nests in old woodpecker holes, but also uses natural cavities and nest boxes. Prefers to locate nests in rather open forests or at forest edges.

FOOD: Sometimes hawks insects from high perches; otherwise flies to the ground from low perches to catch prey. Mostly eats insects and spiders but also some fruits such as elderberries and mistletoe berries.

REFERENCES: Beal 1915a, Herlugson 1982, Tate and Tate 1982.

Mountain Bluebird

Sialia currucoides



RANGE: Breeds from east-central Alaska, southern Yukon, and western Manitoba south in the mountains to southern California, central and southeastern Nevada, northern and east-central Arizona, and southern New Mexico, and east to northeastern North Dakota, western South Dakota, and central Oklahoma. Winters from southern British Columbia and western Montana south to Baja California, Mexico, and southern Texas, and east to eastern Kansas, western Oklahoma, and central Texas.

STATUS: Population is low but stable.

HABITAT: Nests in nearly all forest types of the Rocky Mountain region, usually from 7,000 to 11,000 feet in open forests or near forest edges. During migration and in winter, also frequents grasslands, open brushy country, and agricultural lands.

SPECIAL HABITAT REQUIREMENTS: Cavity nests and feeding perches.

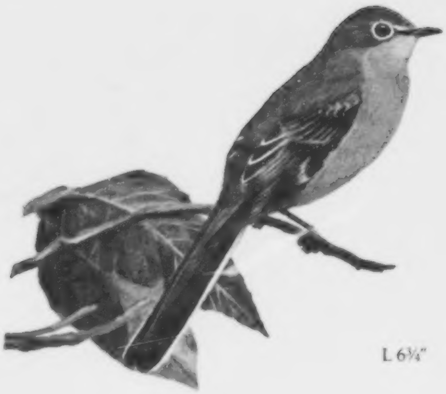
NEST: Usually nests in old woodpecker holes or natural cavities in dead trees in open areas or near forest edges. Will also use nest boxes.

FOOD: Hawks from high perches or flies to the ground to catch its prey. Probably more insectivorous than the other bluebirds; nearly 92 percent of the diet is animal material; the small amount of vegetable food includes fruits, hackberry seeds, and cedar berries.

REFERENCES: Beal 1915a, Burleigh 1972, Herlugson 1982, Scott et al. 1977, Tate and Tate 1982.

Townsend's Solitaire

Myadestes townsendi



RANGE: Breeds from east-central and southeastern Alaska, to west-central Mackenzie south in the mountains to southern California, northern and east-central Arizona, central New Mexico, and northern Mexico, and east to southwestern Alberta, western and southern Montana, southwestern South Dakota and northwestern Nebraska. Winters from southern British Columbia, southern Alberta, Montana, and South Dakota south to Baja California, the southern limit of the breeding range in Mexico, and east to western Missouri, western Oklahoma, and central Texas.

STATUS: Common within parts of its range.

HABITAT: During summer, it is found in montane and subalpine coniferous forests and in thickets and brushy areas adjacent to rocky cliffs up to 12,000 feet in elevation. Winters in open woodland, pinyon-juniper associations, chaparral, desert, and riparian woodlands.

SPECIAL HABITAT REQUIREMENTS: Juniper berries for winter food.

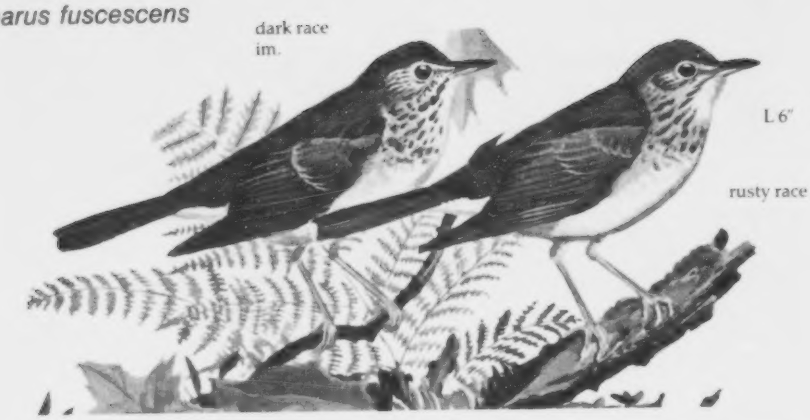
NEST: Builds nest on the ground, partly concealed at the base of a pine or fir, under overhanging banks, or among the roots of a fallen tree.

FOOD: Gleans food from the ground, foliage, and fruiting stems, and hawks for flying insects. Eats insects and spiders during the summer, and mostly juniper berries, along with a few other fruits and seeds, during winter.

REFERENCES: Beal 1915b, Poddar and Lederer 1982, Terres 1980, Verner and Boss 1980.

Veery

Catharus fuscescens



RANGE: Breeds from south-central and southeastern British Columbia to New Brunswick and southwestern Newfoundland, south to central Oregon, southern Idaho, northeastern South Dakota, northern Illinois, and northern Ohio, in the mountains through West Virginia, western and central Maryland, eastern Kentucky, western and central Virginia, eastern Tennessee, and western North Carolina to northwestern Georgia, and in the Atlantic region to eastern Pennsylvania, central New Jersey, and the District of Columbia. Also in east-central Arizona. Winters in South America.

STATUS: Common.

HABITAT: Inhabits low, moist, deciduous woods, bottomland forests, wooded swamps, and damp ravines; prefers sapling stands of deciduous second-growth or open woods with fairly dense undergrowth of ferns, shrubs, and trees.

SPECIAL HABITAT REQUIREMENTS: Moist woodlands with understory of low trees or shrubs.

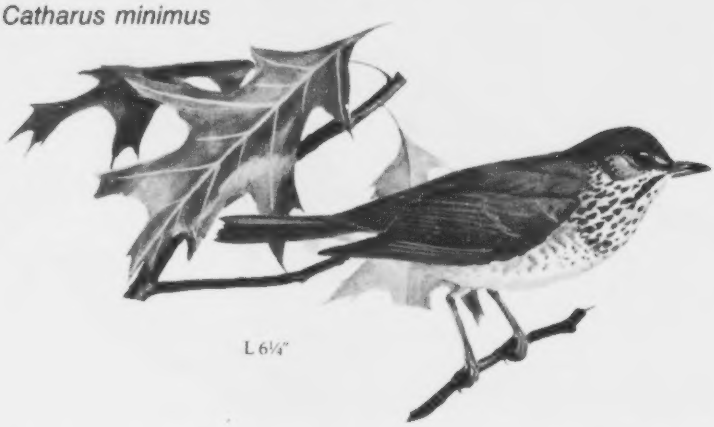
NEST: Builds a bulky nest on or near the ground at the base of a shrub, on a mossy stump, in a clump of weeds, or occasionally in a low shrub or tree.

FOOD: Often forages on the forest floor, turning leaves with bill in search of food; occasionally searches for food in trees. Consumes a diet that is about 57 percent animal and 43 percent vegetable.

REFERENCES: Beal 1915b, DeGraff et al. 1980, Forbush and May 1955, Terres 1980.

Gray-cheeked Thrush

Catharus minimus



RANGE: Breeds from northern Alaska, southern Keewatin, and Newfoundland south to southern Alaska, northwestern British Columbia, northeastern Saskatchewan, eastern New York, Massachusetts, central Vermont, northern New Hampshire, central Maine, and northern Nova Scotia. Winters in South America.

STATUS: Common in portions of its range.

HABITAT: During summer, inhabits coniferous forests (primarily spruce) and tall shrubby areas in taiga. During migration and in winter, also found in deciduous forests and open woodlands. Generally inhabits mountain tops in the Northeast.

SPECIAL HABITAT REQUIREMENTS: Coniferous forests.

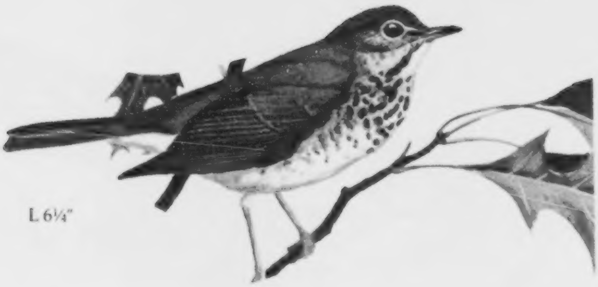
NEST: Usually builds its nest in willows, alders, or spruces, from ground level to 20 feet, but usually about 6 feet above ground on divergent branches close to the trunk.

FOOD: Generally gleans food from the ground; eats insects, spiders, earthworms, crayfish, and berries.

REFERENCES: Beal 1915b, DeGraff et al. 1980, Terres 1980.

Swainson's Thrush

Catharus ustulatus



RANGE: Breeds from western and central Alaska, northern Saskatchewan, central Quebec, and Newfoundland south to southern Alaska, southern and east-central California, central Utah, north-central New Mexico, extreme northern Nebraska, eastern Montana, southern Manitoba, northern Minnesota, southern Ontario, northern Pennsylvania, and southern Maine. Also in eastern West Virginia, western Virginia, and western Maryland. Winters from Mexico south.

STATUS: Rare to locally common.

HABITAT: In summer, inhabits dense coniferous forests (especially spruce) and dense tall shrubbery, or recent clearcuts in low damp areas or near water. In parts of range, prefers aspen-poplar forests and willow or alder thickets, and occasionally breeds in coniferous-deciduous forests. In winter, frequents deciduous forests.

SPECIAL HABITAT REQUIREMENTS: Damp forests or adjacent water.

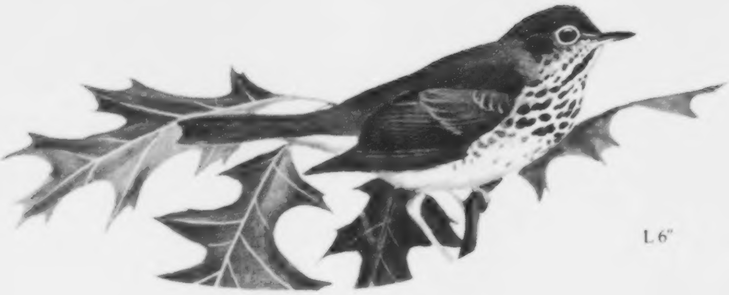
NEST: Builds a bulky cup nest, usually near the trunk, on a horizontal branch of a conifer 2 to 20 feet above the ground.

FOOD: Gleans food from the forest floor, foliage, and branch surfaces. Also eats insects, spiders, millipedes, and small fruits and berries.

REFERENCES: Beal 1915b, DeGraff et al. 1980, Forbush and May 1955, Terres 1980, Verner and Boss 1980.

Hermit Thrush

Catharus guttatus



RANGE: Breeds from western and central Alaska, northern Saskatchewan, and Newfoundland south to southern Alaska, in the mountains to southern California, southern Nevada, southern New Mexico, and western Texas, and east of the Rockies to central Alberta, central Wisconsin, southern Ontario, central Pennsylvania, western Virginia, western Maryland, southern New York, and in the Black Hills in southwestern South Dakota. Winters from southern British Columbia and the northern United States south to Baja California, Mexico, southern Texas, and southern Florida.

STATUS: Common.

HABITAT: In summer, inhabits coniferous, mixed, and deciduous forests with intermediate to high canopy coverage; responds negatively to intensive tree harvests. During migration and in winter, also inhabits chaparral, riparian woodlands, arid pine-oak associations, and desert scrub.

SPECIAL HABITAT REQUIREMENTS: Relatively undisturbed, rather dense forests.

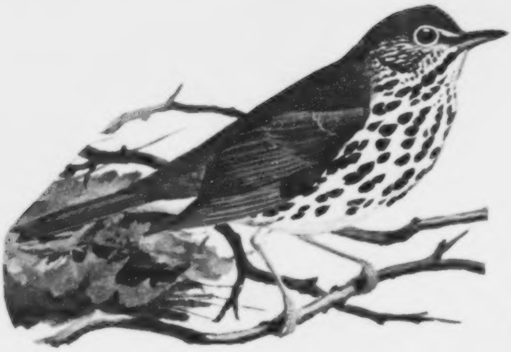
NEST: Usually builds nest in a depression on the ground, under rock ledges, or under low overhanging limbs. Sometimes locates nests in shrubs or small trees near the ground, especially in the West.

FOOD: Gleans most of its food from the ground. Eats insects, spiders, snails, and earthworms, plus considerable amounts of wild fruits in fall and winter.

REFERENCES: Beal 1915b, DeGraff et al. 1980, Forbush and May 1955, Szaro and Balda 1982, Terres 1980, Verner and Boss 1980.

Wood Thrush

Hylocichla mustelina



RANGE: Breeds from southeastern North Dakota, northern Michigan, northern Vermont, southwestern Maine, and Nova Scotia south to east-central Texas, the Gulf Coast and northern Florida, and west to eastern South Dakota, central Kansas, and eastern Oklahoma. Winters from southern Texas south to Central America.

STATUS: Common.

HABITAT: Inhabits cool, mature, lowland deciduous or mixed forests, particularly damp situations and near swamps or water. In New England, also found on wooded slopes; has adapted to gardens and city parks.

SPECIAL HABITAT REQUIREMENTS: Deciduous or mixed forests with tall trees.

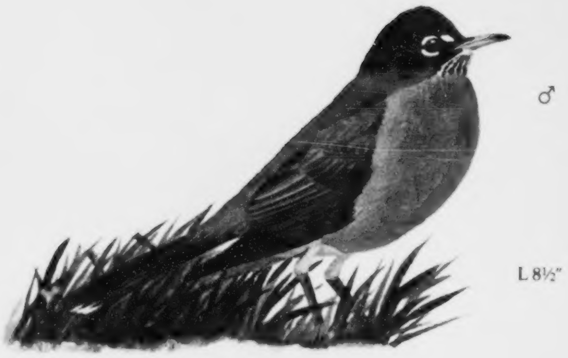
NEST: Builds a compact cup nest on a horizontal limb, in a fork of a sapling or tree, or well hidden in dense shrubbery, generally 6 to 50 feet (average 10 feet) above ground.

FOOD: Gleans most of its food from the ground, but occasionally gleans insects from tree foliage. Eats insects, spiders, snails, earthworms, and berries.

REFERENCES: Beal 1915b, Brackbill 1943, DeGraff et al. 1980, Forbush and May 1955, Terres 1980.

American Robin

Turdus migratorius



RANGE: Breeds from western and northern Alaska, southern Keewatin, northern Quebec, Labrador, and Newfoundland south to southern California, central and southeastern Arizona, Mexico, southern Texas, and central Florida. Winters from southern Alaska, the northern United States and Newfoundland south to Baja California, southern Texas, and southern Florida, throughout Mexico to Central America.

STATUS: Abundant.

HABITAT: Found in nearly all habitats from tree limit in sparsely wooded barrens up to 12,000 feet in the mountains of the West, along forest borders, hedges, orchards, gardens, city parks, and in suburban yards.

SPECIAL HABITAT REQUIREMENTS: Mud for nest building.

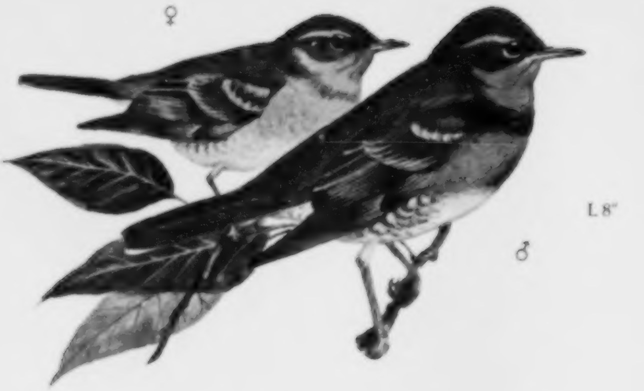
NEST: Places nest, constructed of mud and vegetation, on almost any substantial support, usually in a fork or on a horizontal branch of a shrub or tree; rarely on the ground.

FOOD: Feeds mostly on the ground, searching for almost any edible substance; but also picks fruits from trees and shrubs. Consumes a diet that is about 42 percent animal and 58 percent vegetable.

REFERENCES: Beal 1915b, Forbush and May 1955, Knupp et al. 1977, Terres 1980, Young 1955.

Varied Thrush

Ixoreus naevius



RANGE: Breeds from western and northern Alaska, and northwestern and western Mackenzie south through central and southern Alaska, southwestern Alberta, northwestern Montana, northern Idaho, Washington, and Oregon to extreme northwestern California. Winters from southern Alaska, southern British Columbia, and northern Idaho south through Washington, Oregon, and California to Baja California.

STATUS: Uncommon.

HABITAT: Favors moist, dense stands of fir near mountain lakes, but also inhabits humid coastal and interior montane coniferous forests. Occasionally found in deciduous forests with a dense understory and in tall shrub stands.

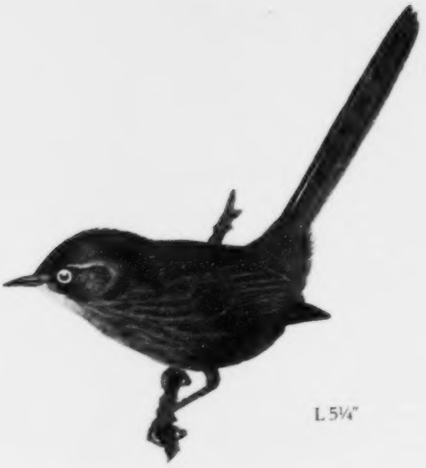
NEST: Builds a bulky nest on a horizontal branch or in a crotch of a tree or shrub, usually 10 to 15 feet above ground.

FOOD: Generally forages for food on the ground, but also gleans food from foliage and fruiting stems. Consumes a variety of vegetable and animal foods including insects, snails, earthworms, acorns, weed seeds, berries, and fruits.

REFERENCES: Beal 1915b, Terres 1980, Verner and Boss 1980.

Wrentit

Chamaea fasciata



RANGE: Resident in coastal areas from northwestern Oregon south to northwestern Baja California, and in interior areas of northern and central California.

STATUS: Common resident in suitable habitat.

HABITAT: Primarily inhabits chaparral but also inhabits other habitats from coastal brushlands up to ponderosa and black oak vegetation types where dense stands of shrubs are present.

SPECIAL HABITAT REQUIREMENTS: Dense shrubs.

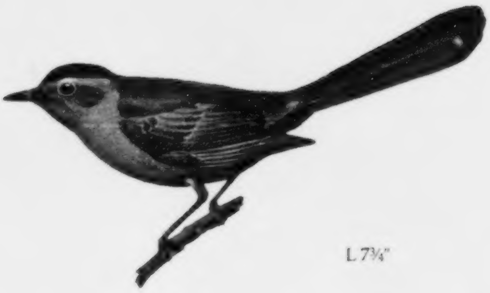
NEST: Builds a compact cup nest of coarse bark, plant fibers, and grasses, which it conceals 1 to 4 feet above the ground in shrubs such as Baccharis.

FOOD: Gleans food from bark surfaces of shrubs; eats primarily insects, spiders, and small fruits.

REFERENCES: Erickson 1938, Terres 1980, Verner and Boss 1980.

Gray Catbird

Dumetella carolinensis



RANGE: Breeds from southern British Columbia, southern Ontario, and Nova Scotia, south to central New Mexico and northern Florida, and west to northern and south-central Washington, south-central and eastern Oregon, north-central Utah, and central and northeastern Arizona. Winters from north-central and eastern Texas, the central portions of the Gulf States and in the Atlantic Coastal lowlands from Long Island south along the Gulf-Caribbean slope of Central America.

STATUS: Common in breeding season.

HABITAT: Prefers dense thickets of shrubby edge habitat, but also inhabits shrubs, briars, vines along woodland borders, dry marsh edges, roadside shrubs, old house sites, abandoned fields, and fence rows.

SPECIAL HABITAT REQUIREMENTS: Low, dense, shrubby vegetation.

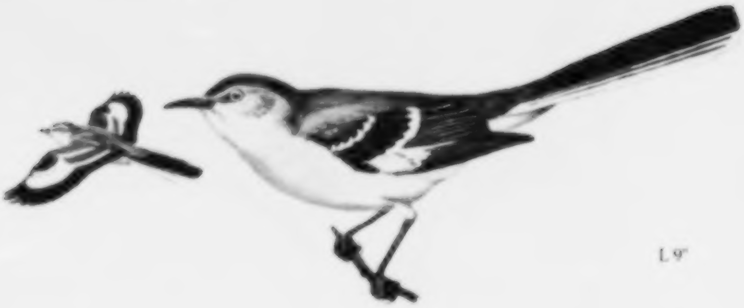
NEST: Hides nest about 3 to 10 feet above the ground in almost any dense woody vegetation such as multiflora rose, barberry, lilac, mock-orange, osage orange, a hedge, or conifer tree.

FOOD: Gleans food from the ground; about half of diet is insects. In the fall, eats a variety of fruits.

REFERENCES: Forbush and May 1955, DeGraff et al. 1980, Nickell 1965, Terres 1980.

Northern Mockingbird

Mimus polyglottos
(formerly Mockingbird)



RANGE: Resident in scattered localities across southernmost Canada from Alberta to Newfoundland; generally resident from northern California, northern Utah, and southern North Dakota, east to southern Maine and south into Mexico. Some northern birds move southward in winter.

STATUS: Common.

HABITAT: Inhabits a variety of open to partly open landscapes such as farm hedges, isolated shrub patches and trees of the prairie, orchards, woodland edges, pastures with scattered fruit-bearing shrubs, and suburbs and cities; absent from forest interiors.

SPECIAL HABITAT REQUIREMENTS: Low, dense, woody vegetation, elevated perches, and a variety of persistent edible fruits.

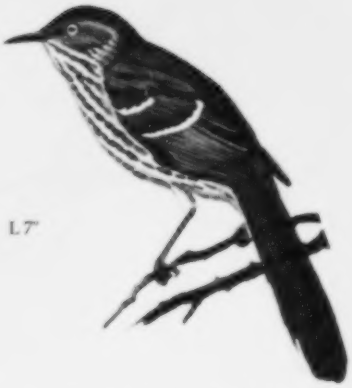
NEST: Builds nest in a fork or on a limb of a small tree, shrub, or vine (preferably evergreen), typically 3 to 10 feet above the ground. Usually produces two broods each year; builds a new nest for each brood.

FOOD: Gleans insects from the ground and foliage, or hawks from the air. Eats fruits in fall and winter.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Laskey 1962, Terres 1980, Verner and Boss 1980.

Sage Thrasher

Oreoscoptes montanus



RANGE: Breeds largely between the Sierra Nevada-Cascade Mountain axis and the Rocky Mountains from southern British Columbia, Montana, and Wyoming south to east-central California, southern Nevada, northern Arizona, New Mexico, and northwestern Texas. Winters from northern Arizona and central Texas south to northern Mexico.

STATUS: Common throughout most its range.

HABITAT: Mainly limited to semiarid sagebrush plains, but may extend into junipers and mountain-mahogany habitats near sagebrush.

SPECIAL HABITAT REQUIREMENTS: Sagebrush.

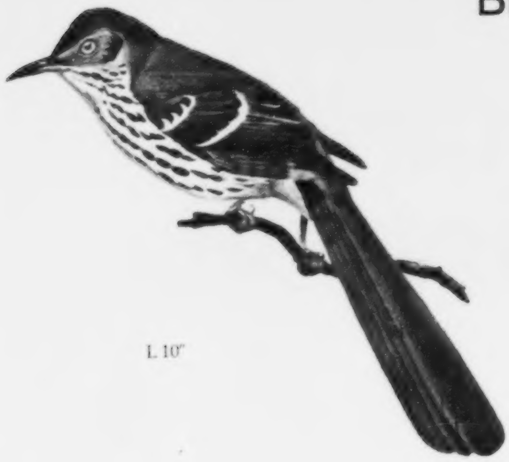
NEST: Sometimes nests on the ground under sagebrush, but usually in branches near the main stem of sagebrush plants, 1 to 3 feet above ground. May also nest in other low-growing shrubs such as greasewood, horsebrush, rabbitbrush, and saltbush.

FOOD: Gleans food from the ground, including great numbers of grasshoppers, Mormon crickets, and other insects. Also eats fruits and berries in the fall.

REFERENCES: Reynolds 1981, Reynolds and Rich 1978, Rich 1978, Terres 1980, Webster in Farrand 1983c.

Brown Thrasher

Toxostoma rufum



RANGE: Breeds from southeastern Alberta east to New England and south to Colorado, northern and eastern Texas, the Gulf Coast, and southern Florida. Winters in the south from Texas eastward, ranging north in the Mississippi Valley to Illinois and along the Atlantic Coast to Massachusetts. Rare visitor as far west as the Pacific Coast in migration and winter.

STATUS: Common in parts of its range.

HABITAT: During summer, inhabits dry thickets in wooded and farming country, brushy pastures, second-growth woods, fencerows, brier patches, roadsides, and sometimes shrubbery of gardens.

SPECIAL HABITAT REQUIREMENTS: Low, dense, woody vegetation for nesting and cover.

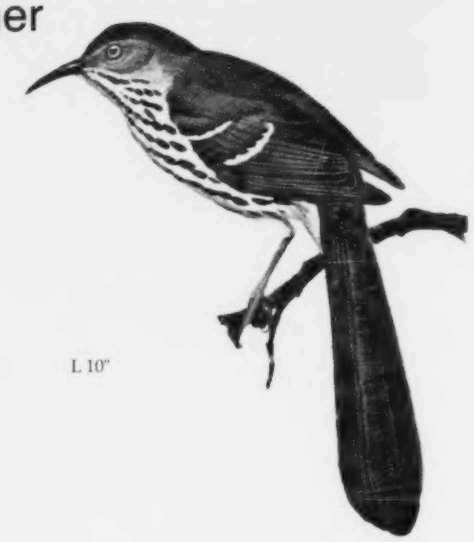
NEST: Builds a bulky nest in any of a variety of shrubs (usually thorny) or low trees, up to 14 feet from the ground, but sometimes on the ground under a small shrub.

FOOD: Gleans food from the ground or in shrubs. In spring, eats almost entirely insects, spiders and worms; in summer and fall, eats mostly fruits, mast (mainly acorns), and waste corn.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Kaufman in Farrand 1983c, Terres 1980.

Long-billed Thrasher

Toxostoma longirostre



RANGE: Resident in southern Texas and eastern Mexico. Accidental in western Texas.

STATUS: Abundant within its range.

HABITAT: Inhabits the brush country of southern Texas, especially dense mesquite. Also found among bottomland willow, huisache, condalia, and various other shrubs.

SPECIAL HABITAT REQUIREMENTS: Dense shrubs.

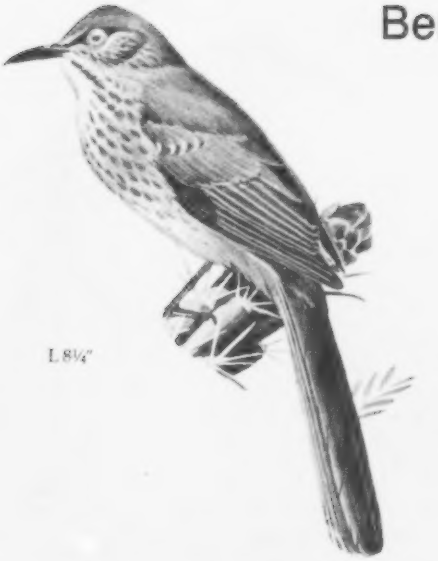
NEST: Nests in pricklypear, yucca, mesquite, or other shrubby plants, usually 4 to 8 feet above the ground, and near the center of the plant.

FOOD: Uncovers food in debris on the ground and in loose soil; mostly eats antlions, ants, beetles, bugs, termites, spiders, and hackberries.

REFERENCES: Cottam and Knappen 1939, Kaufman in Farrand 1983c, Oberholser 1974b, Terres 1980.

Bendire's Thrasher

Toxostoma bendirei



RANGE: Breeds in southeastern California, southern Nevada, southern Utah, western New Mexico, and Sonora. Winters from central-southern Arizona to Sinaloa. Rare in fall to the southern coast of California.

STATUS: Locally common.

HABITAT: Inhabits open desert habitats, especially areas with tall vegetation, cholla cactus, creosote bush, and yucca. May also inhabit pinyon-juniper-sage communities, but tends to avoid large areas of continuous, dense brushy cover and grasslands.

SPECIAL HABITAT REQUIREMENTS: Desert communities.

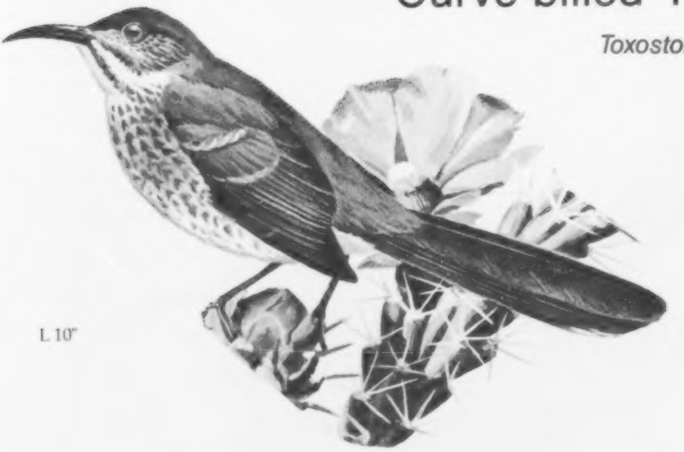
NEST: Builds a compact nest in almost any of the shrubby vegetation found within its habitat, usually 3 to 10 feet above the ground.

FOOD: Spends much of its time on the ground searching and digging for food. Probably has food habits similar to those of other thrashers.

REFERENCES: Bent 1948, Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983c.

Curve-billed Thrasher

Toxostoma curvirostre



RANGE: Resident from central and southeastern Arizona, central and northeastern New Mexico, southeastern Colorado, northwestern Oklahoma, southwestern Kansas, and western and central Texas south to southern Mexico.

STATUS: Common to abundant.

HABITAT: Inhabits deserts with extensive thickets of thorny shrubs (paloverde and mesquite) and dense large cactus (saguaro and cholla), and in brushy riparian and residental areas. Prefers areas with thorny shrubs and thickets at the edge of woodlands.

SPECIAL HABITAT REQUIREMENTS: Desert shrubs.

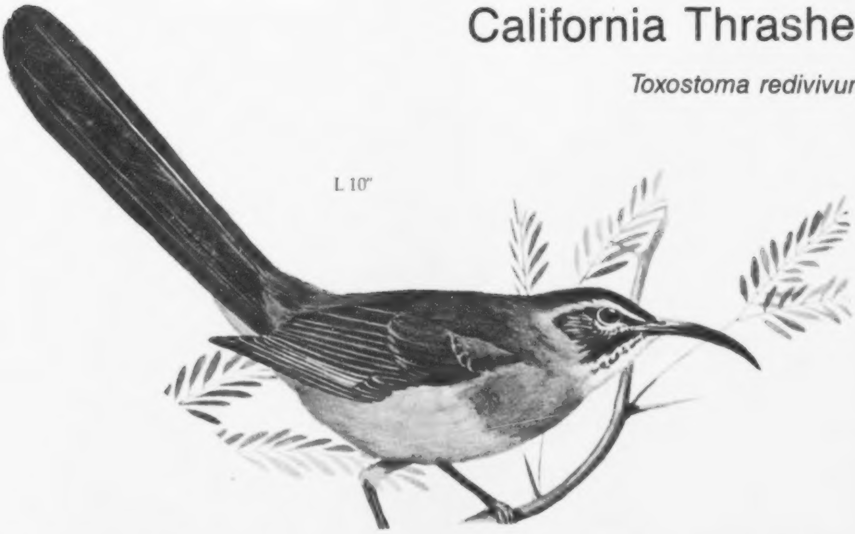
NEST: Usually builds nest in the fork of cholla cactus but may be in yucca, clumps of mistletoe in mesquite and cottonwood, or in mesquite or similar thickets. Favors nest sites at the edge of woodlands or in cultivated areas.

FOOD: Digs in the soil with its curved bill searching for food, and eats beetles, other insects, seeds of cacti, berries, and other fruit.

REFERENCES: Oberholser 1974b, Terres 1980, Terrill in Farrand 1983c.

California Thrasher

Toxostoma redivivum



RANGE: Resident in California north to Humboldt and Shasta Counties (west of the Cascade Mountains-Sierra Nevada and the deserts), and in northwestern Baja California.

STATUS: Fairly common in suitable habitat.

HABITAT: Found most abundantly along mountain bases and up to 5,000 feet elevation. Prefers slopes covered with chaparral or early tree stages of blue oak savannah, digger pine-oak, and riparian deciduous types; also found in foothill towns with mixed brush and short trees, but avoids areas with dense tree canopies.

SPECIAL HABITAT REQUIREMENTS: Dense shrubs.

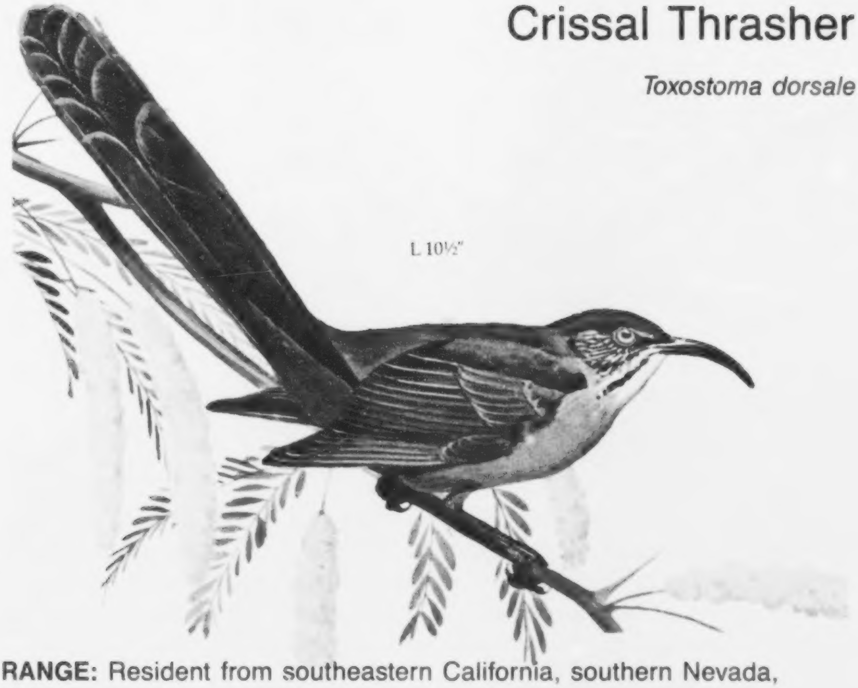
NEST: Builds a large, well-concealed loose cup nest near the ground in a large bush or scrubby tree.

FOOD: Digs in the soil and turns over leaves with its bill in search of food. Eats a diet consisting of insects, spiders, seeds of berries, hazelnuts, weed seeds, and small fruits.

REFERENCES: Beal 1907, Terres 1980, Verner and Boss 1980, Webster in Farrand 1983c.

Crissal Thrasher

Toxostoma dorsale



RANGE: Resident from southeastern California, southern Nevada, southwestern Utah, northwestern and central Arizona, central New Mexico, and western Texas south to northeastern Baja California, central Sonora and central Chihuahua.

STATUS: Common.

HABITAT: Inhabits the more heavily vegetated areas of the southern deserts, such as tall brush along rivers and large washes, and dense mesquite or chaparral from sea level to 6,000 feet elevation.

SPECIAL HABITAT REQUIREMENTS: Dense desert shrubs.

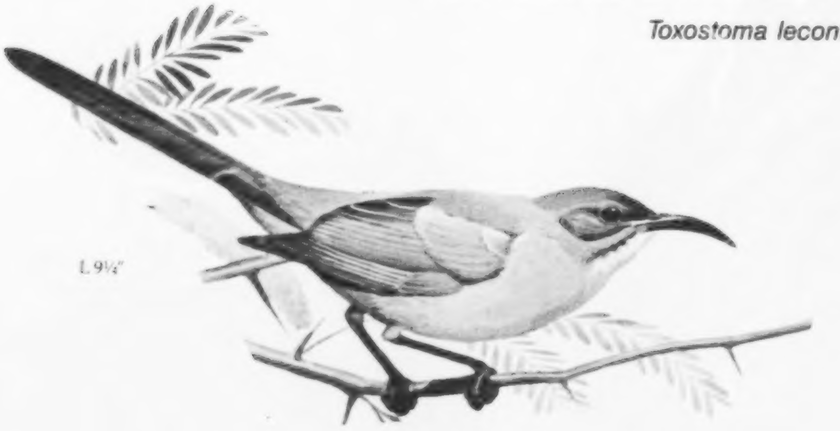
NEST: Most commonly builds a nest saddled on a branch or in a fork of mesquite trees, but also in willow, sagebrush, greasewood, or other desert shrubs, usually 2 to 8 feet above the ground.

FOOD: Eats berries, wild grapes, and insects. (Little is known about its food habits.)

REFERENCES: Bent 1948, Phillips et al. 1964, Terres 1980, Webster in Farrand 1983c.

Le Conte's Thrasher

Toxostoma lecontei



RANGE: Resident in the southern San Joaquin Valley of California and across the deserts east of the coast ranges and the Sierra Nevadas to southern Nevada and southwestern Utah, south to Baja California, northern Sonora, and western and south-central Arizona.

STATUS: Uncommon and local.

HABITAT: Lives in the hottest, driest, most barren deserts of the Southwest, and is most abundant in saltbush and open creosotebush deserts.

SPECIAL HABITAT REQUIREMENTS: Deserts with scattered shrubs.

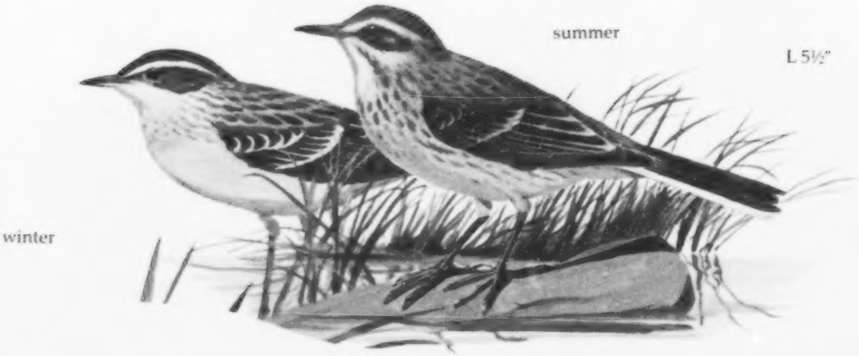
NEST: Builds its nest, a bulky mass of thorny twigs and sticks, usually in cholla cactus but also in other desert shrubs or trees such as mesquite, paloverde, saltbush, sage, ocotillo, and ironwood, usually 4 to 8 feet above the ground.

FOOD: Has food habits that are probably similar to those of other thrashers.

REFERENCES: Bent 1948, Phillips et al. 1964, Terres 1980, Webster in Farrand 1983c.

Water Pipit

Anthus spinoletta



RANGE: Breeds on the Arctic tundra and in the mountains of the West and in Maine. Winters on the Pacific Coast from British Columbia south, and from the southern United States south through Mexico into Central America.

STATUS: Common.

HABITAT: Breeds in alpine and arctic habitats with rough features such as tussocks, tilted rocks, or eroded spots for nest sites. Requires nesting habitat that is free of snow early in the breeding season; prefers moss-grown slopes with southern exposures.

SPECIAL HABITAT REQUIREMENTS: Alpine or arctic tundra with some rough features.

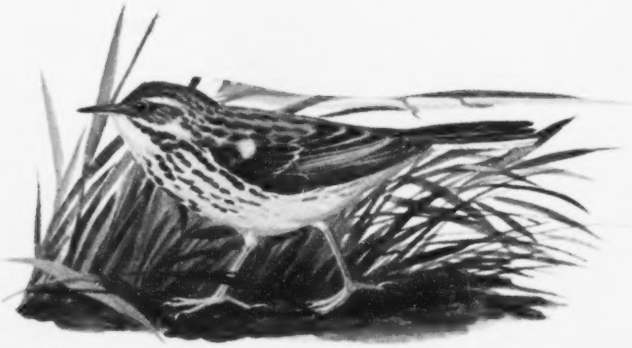
NEST: Builds nest on the ground in the shelter of a rock or bank, beside a mossy hummock, or at the base of a tussock.

FOOD: Forages while walking, gleaning food from the ground and low vegetation. Eats seeds of grasses and weeds, insects, spiders, mites, small mollusks, and crustaceans.

REFERENCES: Forbush and May 1955, Gibb 1956, Sutton and Parmalee 1954a, Terres 1980, Verbeek 1970.

Sprague's Pipit

Anthus spragueii



RANGE: Breeds from north-central Alberta, central Saskatchewan, and west-central and southern Manitoba south to Montana, western South Dakota, North Dakota, and northwestern Minnesota. Winters from the southern tier of the Great Plains States south through Mexico.

STATUS: Common.

HABITAT: Primarily inhabits extensive areas of grasslands dominated by grasses of medium height. Also inhabits large alkaline meadows and meadow zones of large alkali lakes.

SPECIAL HABITAT REQUIREMENTS: Extensive prairie.

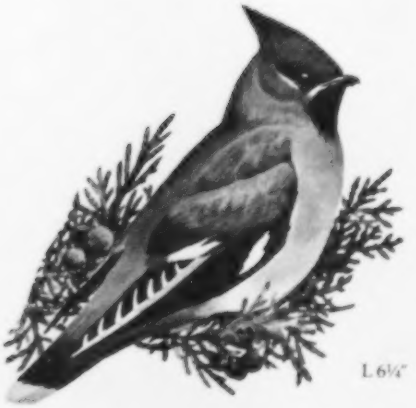
NEST: Constructs nest of grasses in hollows of the ground, and in clumps of grasses or grasslike plants.

FOOD: In summer, mostly eats insects and weed seeds. In winter, flocks frequently in weed-grown fields, eating weed seeds.

REFERENCES: Bent 1950, Forbush and May 1955, Johnsgard 1979, Terres 1980.

Bohemian Waxwing

Bombycilla garrulus



RANGE: Breeds from central Alaska, Yukon, southwestern Mackenzie, and northern Manitoba south to northern parts of Washington, Idaho, and Montana, central Saskatchewan, and central Manitoba. Winters south to Washington, Colorado, the Great Lakes, and Maine, east to Ontario, southern Quebec, Nova Scotia, and the northern tier of states. Winters irregularly to California, Arizona, northern New Mexico, and northern Texas.

STATUS: Common.

HABITAT: During summer, inhabits open coniferous forests, muskegs, and less frequently, mixed coniferous-deciduous woodlands. Wanders in large flocks in winter and may be abundant wherever food is available.

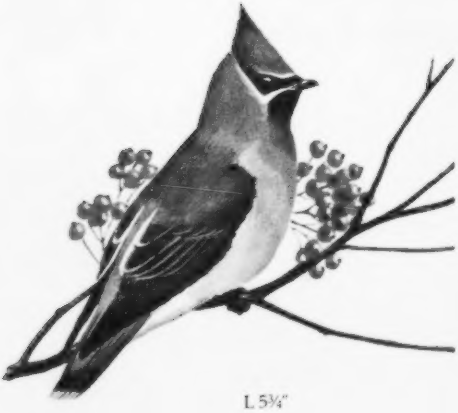
NEST: Constructs nest of twigs, grasses, and lichens, usually on a horizontal branch of an isolated spruce, tamarack, or pine in open muskeg, 4 to 50 feet above the ground.

FOOD: In summer, mostly eats insects, catching many of them by hawking from high perches. In fall and winter, eats mostly fruits, with fruits of mountain-ash and berries of cedar and juniper the most important winter foods. In spring, also eats sap from maple trees.

REFERENCES: Bent 1950, Eckert in Farrand 1983c, Forbush and May 1955, Terres 1980.

Cedar Waxwing

Bombycilla cedrorum



L 5¾"

RANGE: Breeds from southeastern Alaska, central British Columbia, Alberta, Saskatchewan, northern Manitoba, Ontario, central Quebec, and Newfoundland south to northern California, Nevada, Utah, Colorado, South Dakota, central Missouri, Illinois, Indiana, northern Georgia, western North Carolina, and Virginia. Winters from southern British Columbia, Montana, Saskatchewan, Manitoba, Ontario, New York, and New England south to Central America.

STATUS: Locally common to rare.

HABITAT: Inhabits a wide variety of open coniferous and deciduous forests, forest edges, farmsteads, parks, and residential areas, but absent from dense forests. During winter, found almost anywhere that trees and shrubs with persistent fruits are present.

SPECIAL HABITAT REQUIREMENTS: Fruit- and berry-producing trees and shrubs.

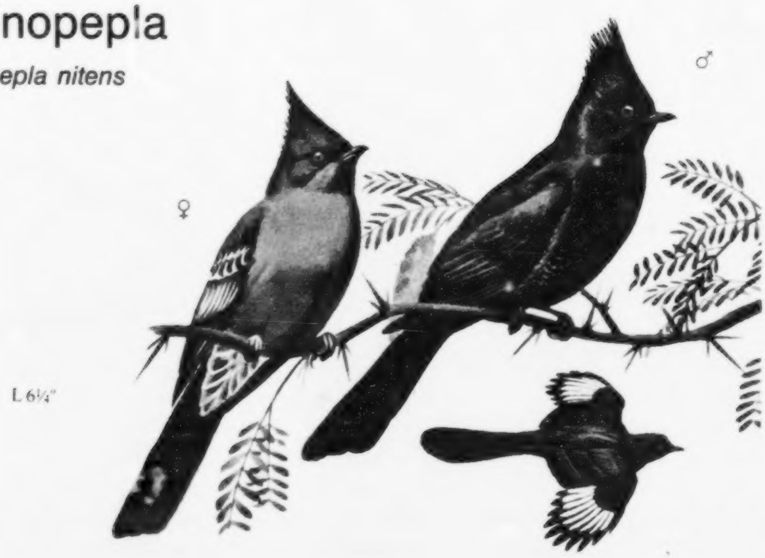
NEST: Builds its nest semicolonially in dense coniferous thickets (often cedar) but will use a variety of deciduous trees and shrubs. Places nest on a horizontal limb, often in a crotch next to the main trunk, 4 to 50 feet above the ground.

FOOD: Gleans insects from leaf surfaces or hawks from perches. In summer, consumes a diet of about 20 percent insects. In fall and winter, eats nearly all fruits and berries.

REFERENCES: DeGraff et al. 1980, Eckert in Farrand 1983c, Forbush and May 1955, Lea 1942, Putnam 1949, Terres 1980.

Phainopepla

Phainopepla nitens



RANGE: Breeds from central California, southern Nevada, southern Utah, southern New Mexico, and western Texas south to Baja California and into Mexico. Winters from southern California, southern Nevada, central Arizona, southern New Mexico and western and southern Texas south into Mexico.

STATUS: Locally common to uncommon or rare.

HABITAT: In deserts, primarily inhabits washes, riparian areas, and other habitats that support a brushy growth of mesquite and paloverde. In more northern and coastal areas, inhabits oak chaparral and riparian oak woodlands.

SPECIAL HABITAT REQUIREMENTS: Trees or shrubs and berries (especially mistletoe).

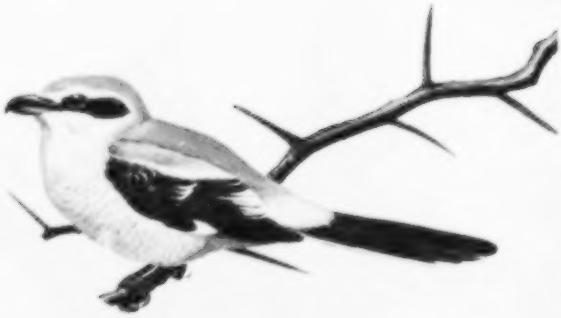
NEST: Builds nest (almost exclusively by the male) in a forked limb of a mesquite, cottonwood, hackberry, willow, sycamore, oak, or citrus tree, often in a clump of mistletoe, 4 to 50 feet above the ground.

FOOD: During the breeding season, captures many insects by hawking from high perches. During other periods, primarily eats fruits and berries (especially mistletoe berries).

REFERENCES: Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983c, Verner and Boss 1980.

Northern Shrike

Lanius excubitor



L 8"

RANGE: Breeds in Alaska, the Yukon, southwestern Mackenzie, and northern parts of Manitoba, Quebec, and Labrador. Winters from southern Alaska and the southern half of Canada south to northern California, central Nevada, northern Arizona, northern New Mexico, Kansas, northern Missouri, central Illinois, Indiana, Ohio, Pennsylvania, and New Jersey.

STATUS: Locally common in summer range; uncommon in winter.

HABITAT: Inhabits a broad belt of coniferous forest or taiga across Canada and Alaska during summer; strongly prefers forest edges, open willow brush, and brush-bordered swamps and bogs. Prefers semiopen country with short grasses and scattered trees or shrubs during winter.

SPECIAL HABITAT REQUIREMENTS: Elevated perches, short vegetation.

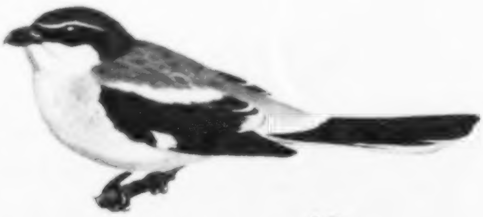
NEST: Builds a bulky, loose nest of twigs, in spruces, willows, or bushes, 5 to 20 feet above the ground.

FOOD: Attacks prey from an elevated perch by hawking or hovering, then diving and pouncing. Mostly eats small birds and mammals; also eats insects (especially grasshoppers and crickets), and some snakes, lizards, and frogs.

REFERENCES: Bent 1950, DeGraff et al. 1980, Eckert in Farrand 1983c, Miller 1931, Terres 1980.

Loggerhead Shrike

Lanius ludovicianus



L 7"

RANGE: Breeds from central Alberta, central Saskatchewan, southern Manitoba, Minnesota, central Wisconsin, central Michigan, and southeastern Ontario, south to Mexico and the Gulf Coast. Very rare or absent from most of the Appalachians, Pennsylvania, New York, and New England. Winters in the southern half of the United States and in Mexico.

STATUS: On the 1982 Blue List for declining species as a species of concern (mostly in the East); common in parts of the West.

HABITAT: Inhabits open country with scattered shrubs or small trees such as shelterbelts, cemeteries, farmsteads, or hedgerows in the plains country and Midwest. In the West, breeds in savannah, pine-oak woodlands, and chapparal types, and prefers very open stands.

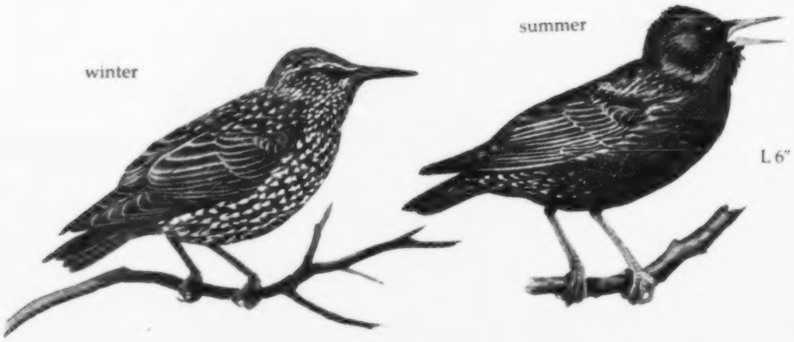
NEST: Builds a bulky, cup-shaped nest in a variety of shrubs and low, dense trees, rarely less than 3 feet or more than 25 feet above the ground. Hides the nest well below the crown of the bush or tree.

FOOD: Sometimes hawks for aerial insects, but takes most of its prey as it dives to the ground from an elevated perch. In the West, eats about 83 percent insects; in the East, 68 percent. Eats mostly grasshoppers and crickets, but also a variety of other insects, small mammals, birds, and reptiles.

REFERENCES: Beal and McAtee 1912, Eckert in Farrand 1983c, Johnsgard 1979, Kridelbaugh 1983, Miller 1931, Morrison 1981, Porter et al. 1975, Tate and Tate 1982.

European Starling

Sturnus vulgaris
(formerly Starling)



RANGE: Introduced to North America from Europe. Breeds from southeastern Alaska and the southern half of all Canadian provinces south to Mexico, the Gulf of Mexico, and southern Florida. Still uncommon in some recently occupied parts of the Southwest and the Rocky Mountains, but continues to expand range. Migrates sometimes in the northern part of the range.

STATUS: Abundant in most of its range.

HABITAT: Occupies a great variety of habitats from suburban to rural and woodlands wherever suitable nesting sites occur. Appears to favor thickly settled agricultural areas and tends to avoid dense forests away from human habitation.

SPECIAL HABITAT REQUIREMENTS: Cavities for nesting.

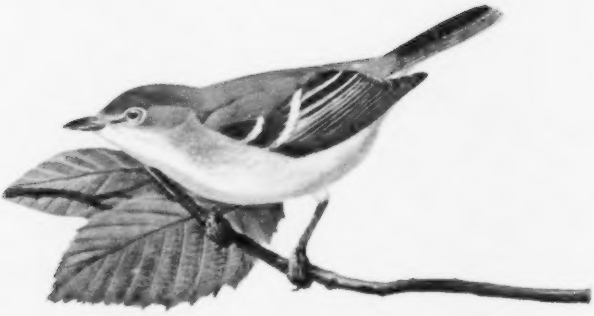
NEST: Normally selects an old woodpecker or natural cavity in trees, utility poles, or fence posts but is extremely adaptable in its choice of nest sites. Usually nests earlier than many other cavity nesters and may be a serious competitor for available nest cavities.

FOOD: Generally forages on the ground. Is sometimes considered a serious agricultural pest in some areas because it eats practically all grains, digs up sprouting seeds, and eats livestock feed. However, is considered beneficial in some areas because more than half of the diet is animal material, including clover weevils, cutworms, and japanese beetles. Also eats a variety of domestic and wild fruits.

REFERENCES: Forbush and May 1955, Kalmbach 1928, Kessel 1953, 1957, Planck 1967, Royall 1966, Small 1974.

White-eyed Vireo

Vireo griseus



L 4½″

RANGE: Breeds from southeastern Nebraska and central Iowa to southern Michigan, southern Ontario, and southern Massachusetts, south through eastern Texas and Florida into eastern Mexico. Winters from southern Texas south to Central America and east across the Gulf Coast to Florida, north to central coastal North Carolina.

STATUS: Common.

HABITAT: Inhabits deciduous thickets, woodland edges, brambles, undergrowth, hedgerows, and the dense understory of bottomland woodlands, generally favoring thickets near water. May inhabit highlands in the South.

SPECIAL HABITAT REQUIREMENTS: Low shrubby vegetation.

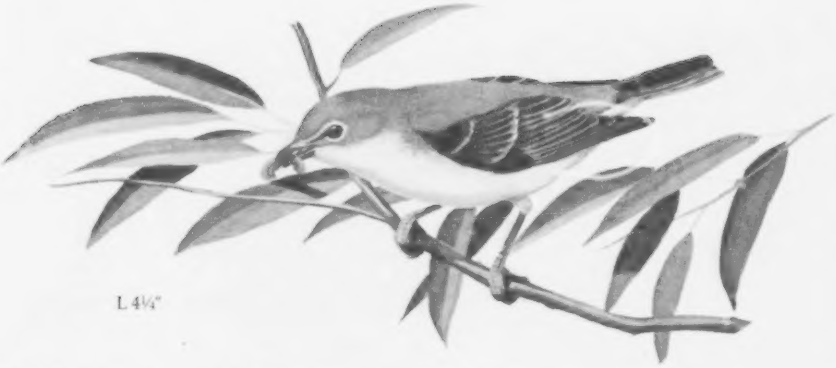
NEST: Builds a cone-shaped cup nest that is suspended from forked twigs of a low shrub or tree, usually well concealed, 1 to 8 feet above the ground.

FOOD: Gleans its food, primarily insects, from branches and leaves. Eats mostly animal matter (90 percent of diet), but eats some berries and small fruits in winter.

REFERENCES: Chapin 1925, Forbush and May 1955, Johnsgard 1979, Nolan and Wooldridge 1962, Sykes in Farrand 1983c.

Bell's Vireo

Vireo bellii



RANGE: Breeds from southern California (local and rare), southern Nevada, Arizona, southern New Mexico, north into the Midwest (east of the Rocky Mountains) to North Dakota and east to Illinois and south to southwestern Tennessee, Arkansas, northwestern Louisiana, Texas, and Mexico. Winters from Mexico south to Central America.

STATUS: Rare to absent from some former ranges in California, declining in Kansas, Oklahoma, and Texas. (Some decline may result from cowbird parasitism.)

HABITAT: Throughout most its range, inhabits streamside willows. In the arid Southwest, lives along water courses and marshes where mesquite is mixed with cottonwood, saltcedar, elderberry, and desert hackberry. In the Great Plains, generally associated with thickets near streams and rivers, or with second-growth scrub, forest edges, and brush patches.

SPECIAL HABITAT REQUIREMENTS: Dense riparian shrubs.

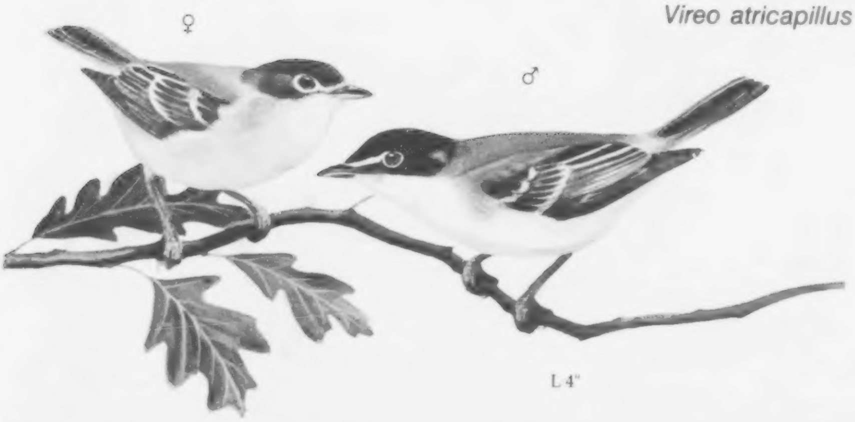
NEST: Builds a small, basketlike cup nest attached to a forked branch of mesquite, hackberry, catclaw, oak, willow, ash, cottonwood, or low shrub, usually near water and seldom more than 5 feet above the ground.

FOOD: Mostly eats animal matter (insects and spiders), gleaned from leaves and branches; also eats a few berries.

REFERENCES: Chapin 1925, Forbush and May 1955, Johnsgard 1979, Tate and Tate 1982, Verner and Boss 1980, Terrill in Farrand 1983c.

Black-capped Vireo

Vireo atricapillus



RANGE: Breeds in central Oklahoma locally through central and western Texas to north-central Mexico. Winters mainly in western Mexico.

STATUS: Fairly common to uncommon. Populations decreasing.

HABITAT: Generally inhabits the dense, low, ragged-topped thickets growing in hot, rocky hillsides, including stands of oaks, mescalbean, sumac, cedar, or other chaparral brush; prefers scrub oaks. May also be found in prairie ravines and early successional stages of brushlands. Prefers habitat arranged in rectangular or oval formation instead of linear.

SPECIAL HABITAT REQUIREMENTS: Low, dense shrubs or trees.

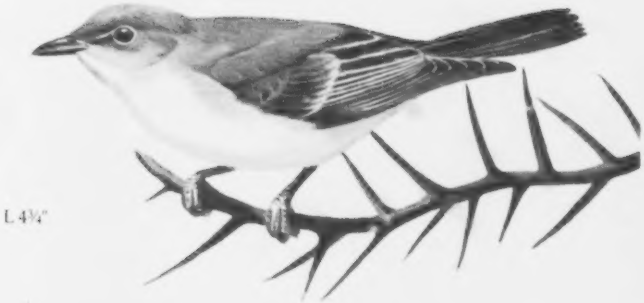
NEST: Builds a deep, cuplike nest suspended from a fork of slender twigs in trees or shrubs, usually 2 to 6 feet above the ground. Prefers oaks in parts of its range, but uses other tree and shrub species.

FOOD: Gleans insects from leaves of shrubs (especially oaks). Also eats a few spiders and small fleshy fruits.

REFERENCES: Graber 1961, Kaufman in Farrand 1983c, Johnsgard 1979, Oberholser 1974b.

Gray Vireo

Vireo vicinior



RANGE: Breeds locally from southern California, southern Nevada, southern Utah, and northwestern and central New Mexico south to Baja California, central and southeastern Arizona, southern New Mexico, western Texas, and central Mexico. Also in western Oklahoma. Winters in southern Arizona, western Texas, and western Mexico.

STATUS: Rare to locally common.

HABITAT: Inhabits thorn scrub, oak-juniper woodland, pinyon-juniper, dry chaparral, mesquite, and riparian willow habitats. Favors dry chaparral that forms a continuous zone of twigs 1 to 5 feet above ground.

SPECIAL HABITAT REQUIREMENTS: Low, dense shrubs.

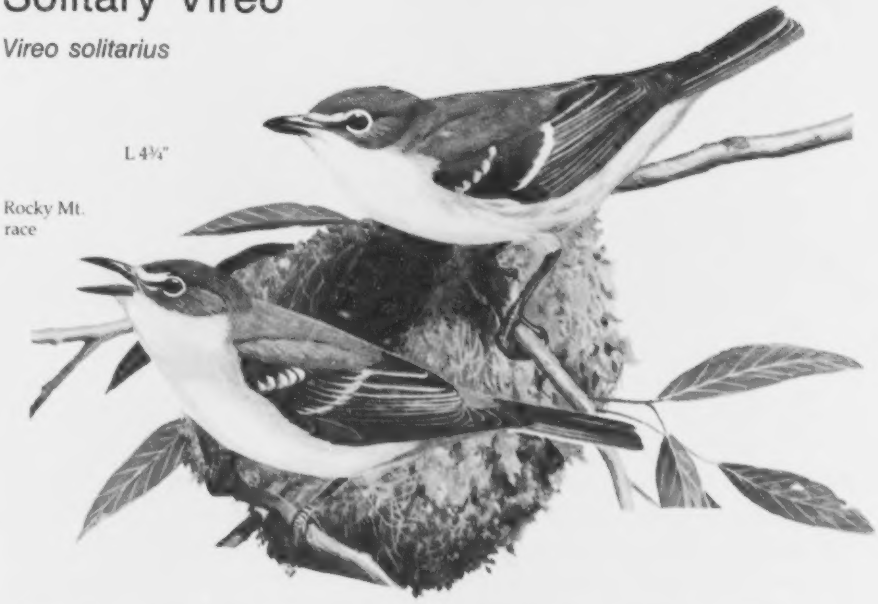
NEST: Builds a basketlike cup nest that is suspended 3 to 8 feet above the ground from the forks of twigs in a variety of low, thorny shrubs and small trees.

FOOD: Gleans food (mostly insects) from leaves and branches of scrub oaks and other thickets.

REFERENCES: Chapin 1925, Johnsgard 1979, Terres 1980, Terrill in Farrand 1983c.

Solitary Vireo

Vireo solitarius



RANGE: Breeds from central British Columbia east through central Canada to northern Ontario and Newfoundland, southwest of and through the Rockies to southern California and west Texas, south through Mexico to Honduras, and east of the Rockies to North Dakota, Illinois, and Massachusetts; in the Appalachian and Piedmont regions to eastern Tennessee, Alabama, Georgia, South Carolina, North Carolina, Virginia, and Maryland. Winters from southern California, central Texas, the northern portions of the Gulf States and North Carolina south to Costa Rica.

STATUS: Common.

HABITAT: Usually inhabits coniferous or coniferous-deciduous forests, especially spruce and tamarack swamps in parts of its range. Seems to prefer open mixed forests with considerable undergrowth.

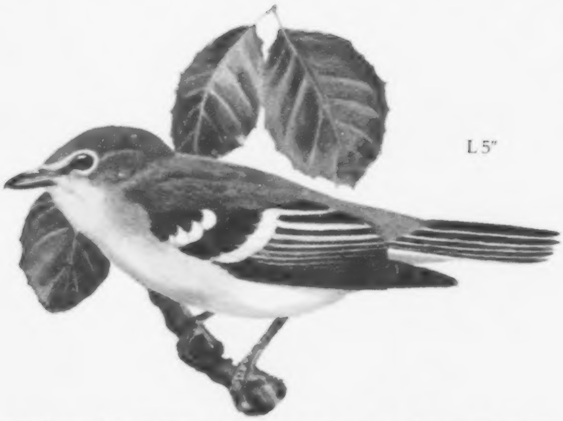
NEST: Builds a deep cup nest that is suspended from the fork of a horizontal branch, generally 3 to 20 feet above the ground, often about midway in a small conifer, but occasionally in a small deciduous tree or shrub.

FOOD: Gleans most food from twigs and foliage but occasionally hawks for flying insects. Mostly eats insects, plus a few spiders and small fruits.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Harrison 1975, Johnsgard 1979, Petersen in Farrand 1983c, Terres 1980.

Yellow-throated Vireo

Vireo flavifrons


L 5"

RANGE: Breeds from southern Manitoba, Minnesota, southern Ontario, New Hampshire and southwestern Maine south to eastern Texas, the Gulf Coast and central Florida and west to the Dakotas, Nebraska, Kansas, Oklahoma, and west-central Texas. Winters mainly in Mexico and Central and South America, but a few winter in Florida.

STATUS: Rather uncommon to common.

HABITAT: Generally associated with mature, moist deciduous forests, especially river bottom forests or north-facing slopes (in southern parts of range), and prefers open woodlands with partially open canopies. Found less frequently in wooded residential areas, seldom in dense deciduous forests, and rarely in coniferous forests.

SPECIAL HABITAT REQUIREMENTS: Open, mature deciduous woodlands.

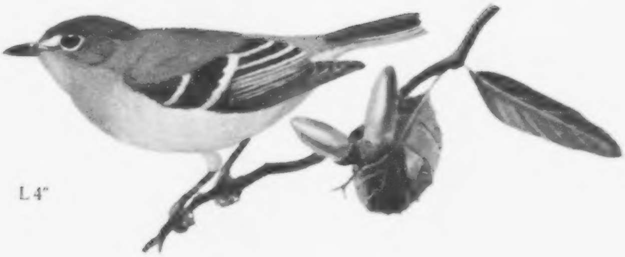
NEST: Suspends nest between the forks of a slender branch, usually near the trunk, of a deciduous tree, preferably a large oak, normally over 30 feet above the ground (range 3 to 60 feet.)

FOOD: Gleans most of its food from branches and foliage; occasionally hawks for flying insects. Mostly eats insects, spiders, and a few snails, but also a few small fruits and berries.

REFERENCES: Chapin 1925, Forbush and May 1955, James 1976, Johnsgard 1979.

Hutton's Vireo

Vireo huttoni


L 4"

RANGE: Resident from southwestern British Columbia south through western Washington, Oregon, and California to Baja California, and from central Arizona, southwestern New Mexico, and western Texas south to Guatemala.

STATUS: Fairly common.

HABITAT: Primarily inhabits live oak forests but also pine-oak communities; mountain canyons with sycamores, maples, and tall chaparral; or streamside willows. Prefers tree stands with open canopies.

SPECIAL HABITAT REQUIREMENTS: Live oaks.

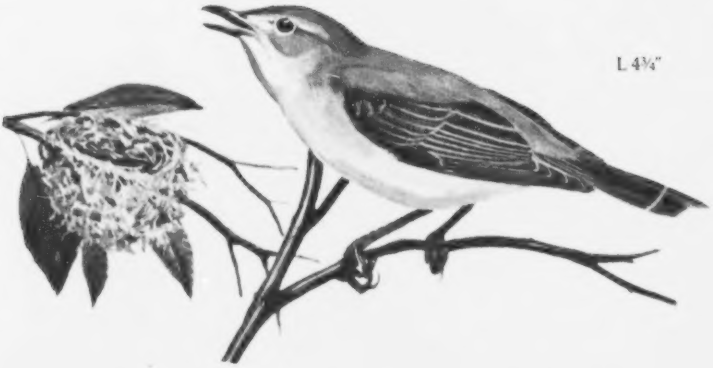
NEST: Builds a hanging cup nest that is anchored to horizontal twigs and usually near the tips of the branches, mostly in oaks. Locates nest 7 to 25 feet above the ground.

FOOD: Gleans food from foliage and small twigs, and occasionally hawks flying insects. Mostly eats insects, plus some spiders and small berries.

REFERENCES: Chapin 1925, Harrison 1979, Verner and Boss 1980, Terrill in Farrand 1983c.

Warbling Vireo

Vireo gilvus



RANGE: Breeds from southeastern Alaska, northern British Columbia, and southern Mackenzie southeast to southern Ontario and southern New Brunswick, south to northern Mexico, Alabama, and Virginia. Winters mostly in Mexico and Central America.

STATUS: Common and widespread.

HABITAT: Inhabits open deciduous and mixed deciduous-coniferous forests, especially streamside vegetation, but also in groves, scrubby hillside trees, and residential areas. In mixed forests, generally associated with the deciduous trees, and prefers forests with a substantial forb or shrub layer and low to intermediate canopy cover.

SPECIAL HABITAT REQUIREMENTS: Scattered deciduous trees or wooded streamsides.

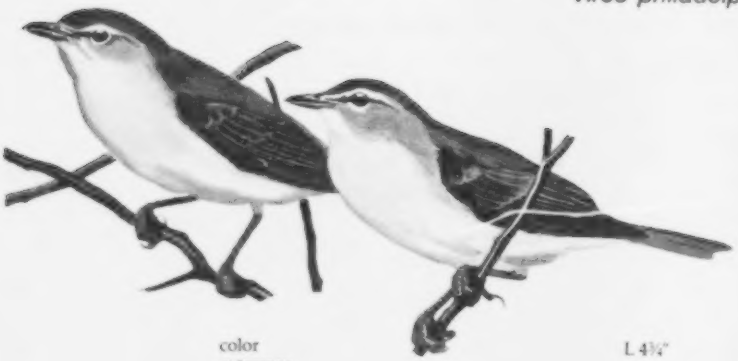
NEST: Builds a cup nest that is usually suspended from a horizontal branch of a deciduous tree, often poplar or aspen, generally in branches well away from the tree trunk and higher than those of other vireos (20 to 90 feet above the ground).

FOOD: Gleans much of its food from the mid to upper canopy of deciduous trees. Eats mostly animal matter but includes some small fruits.

REFERENCES: Chapin 1925, DeGraff et al. 1980, Forbush and May 1955, Harrison 1975, James 1976, Johnsgard 1979.

Philadelphia Vireo

Vireo philadelphicus



RANGE: Breeds from east-central British Columbia to central Manitoba and southwestern Newfoundland, south to south-central Alberta, north-central North Dakota, northeastern Minnesota, southern Ontario, northern New Hampshire, northern Vermont, and Maine. Winters in Central America.

STATUS: Uncommon to rare.

HABITAT: Inhabits open deciduous, coniferous, or mixed forests, woodland edges, burned or cutover areas with young deciduous regeneration, and willow and alder thickets along streams. Is restricted to aspen groves in parts of its range.

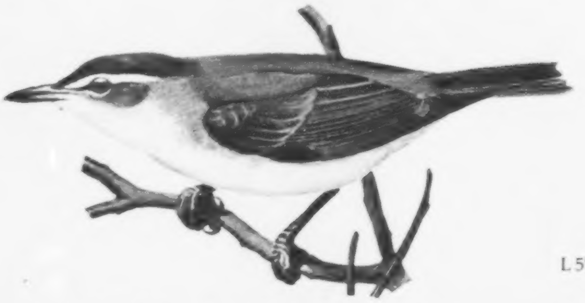
NEST: Builds a deep cup nest that is suspended from a horizontal, forked branch of a deciduous tree or shrub, usually 10 to 40 feet above the ground.

FOOD: Mainly (93 percent) eats animal material (insects and some spiders), most of which is gleaned from foliage and branches; catches some flying insects by hawking. Also eats some wild fruits.

REFERENCES: Chapin 1925, DeGraff et al. 1980, Johnsgard 1979, Petersen in Farrand 1983c.

Red-eyed Vireo

Vireo olivaceus
(includes Yellow-green Vireo (*Vireo flavoviridis*))



RANGE: Breeds from southwestern British Columbia and southern Mackenzie southeast to central Ontario and the Maritime Provinces, south to northern Oregon, eastern Colorado, western Oklahoma to central Texas, the Gulf Coast, and central Florida. Very rare in California, Arizona, and southern Texas. Winters in South America.

STATUS: Abundant; rare in the Southwest.

HABITAT: Inhabits open deciduous and mixed forests with dense understory of saplings, in wooded clearings, or borders of burns. Found in both upland and river-bottom forests, and sometimes in residential areas where abundant shade trees provide a continuous canopy. Seldom found where conifers make up 75 percent or more of the basal area.

SPECIAL HABITAT REQUIREMENTS: Deciduous trees with dense understory.

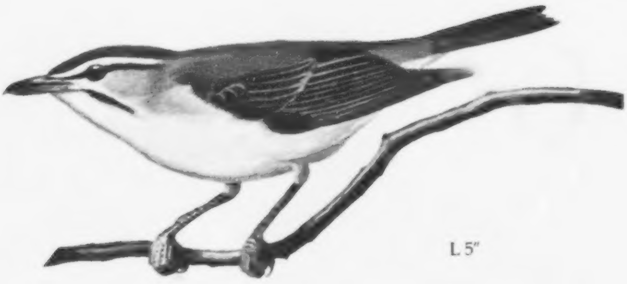
NEST: Builds nest in deciduous or coniferous trees or shrubs. Suspends deep cup nest from a horizontal fork of a slender branch, usually in dense foliage 5 to 10 feet above the ground, but sometimes as high as 60 feet.

FOOD: Consumes insects, gleaned from leaf surfaces in mid to upper tree canopies, for about 85 percent of the diet. Also eats spiders, a few snails, wild fruits, and berries.

REFERENCES: Chapin 1925, Forbush and May 1955, James 1976, Johnsgard 1979, Laurence 1953a.

Black-whiskered Vireo

Vireo altiloquus



RANGE: Breeds in central and southern Florida and on islands in the Caribbean; winters in South America.

STATUS: Common within much of its limited United States range.

HABITAT: Lives mostly in mangroves along the coasts of Florida and the Florida Keys.

SPECIAL HABITAT REQUIREMENTS: Dense mangroves.

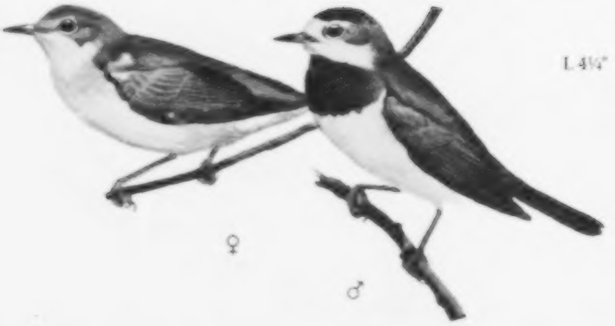
NEST: Suspends deep cup nest between twigs (usually in red mangroves but occasionally in other trees or shrubs) as high as 15 feet above the ground or water.

FOOD: Gleans food, primarily spiders, from foliage. Also eats insects, fruits of barberries, and ragweed seeds.

REFERENCES: Bent 1950, Chapin 1925, Sykes in Farrand 1983c, Terres 1980.

Bachman's Warbler

Vermivora bachmanii



RANGE: Formerly bred in northeastern Arkansas, southeastern Missouri, south-central Kentucky, central Alabama, and southeastern South Carolina. May still breed in South Carolina. Winters in Cuba and the Isle of Pines.

STATUS: Rarest songbird in North America; endangered, possibly extinct. Reasons for its decline are not clear.

HABITAT: Inhabits low, moist, deciduous woodlands and swamps of the southern coastal plain, where it probably occurred primarily in sweet bay-swamp tupelo-red maple associations of headwater swamps, sweet gum-willow oak associations of wet flats, and in bottomland hardwoods. Appeared to use forest bottomlands and headwater swamps that were inundated with water for relatively short periods of time.

SPECIAL HABITAT REQUIREMENTS: Mature deciduous swamp forests.

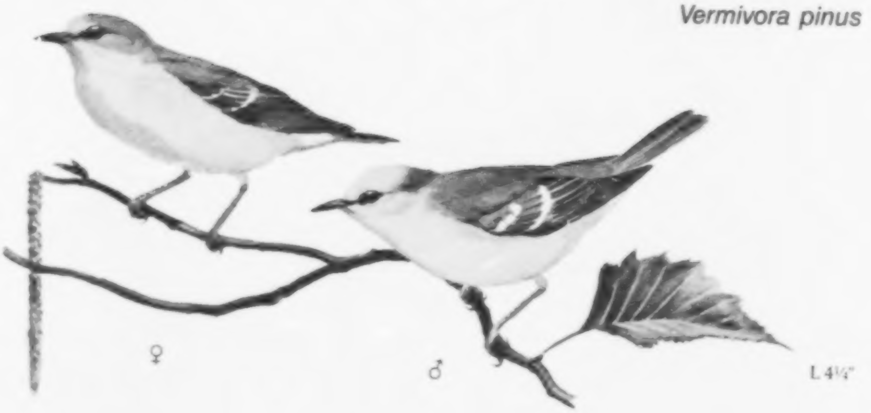
NEST: Locates nest in canebreaks and thickets 2 to 5 feet above the ground in and along the margins of low, wet forested habitats. (Little is known about its nesting habits.)

FOOD: Forages in dense foliage high up in trees for spiders and insects. (Little is known about feeding habits.)

REFERENCES: Griscom and Sprunt 1979, Hooper and Hamel 1977, Mackenzie 1977, Meanley and Mitchell 1958, Sykes in Farrand 1983c.

Blue-winged Warbler

Vermivora pinus



RANGE: Breeds from eastern Nebraska and southeastern Minnesota east to southern Vermont and southern Maine, and south to northwestern Arkansas, northern Alabama, northern Georgia, western South Carolina, and Delaware. Winters in Mexico south to Central America.

STATUS: Uncommon.

HABITAT: Inhabits rank growth near the borders of swamps or streams, woodland edges, brushy overgrown fields and pastures, thickets, and second-growth woods. Prefers old fields with saplings greater than 10 feet tall. Prefers more moist habitats than the golden-winged warbler, a closely related species with which it competes and, in some areas, hybridizes.

SPECIAL HABITAT REQUIREMENTS: Brushy habitats near water.

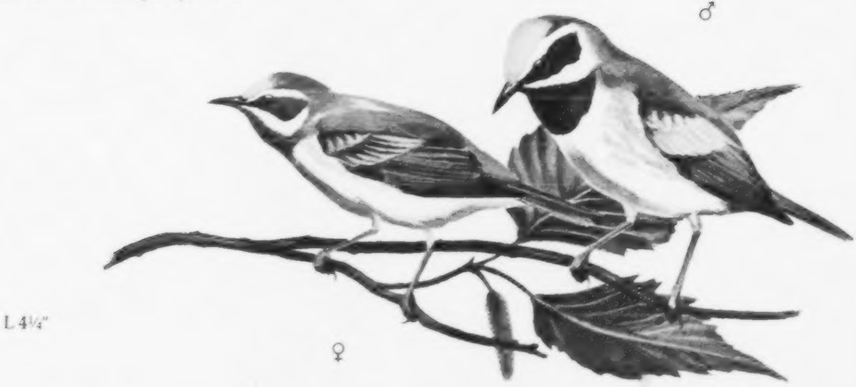
NEST: Builds nests on the ground, attached to upright stems of weeds or grass clumps. Usually nests in loose aggregations or colonies among bushes, ferns, tangles of vines, or grasses.

FOOD: Gleans insects and spiders from leaves, twigs, and buds among branches near the tops of trees.

REFERENCES: Confer and Knapp 1981, DeGraff et al. 1980, Griscom and Sprunt 1979, Harrison 1975, Johnsgard 1979, Robbins et al. 1983.

Golden-winged Warbler

Vermivora chrysoptera



RANGE: Breeds from southern Manitoba, central Minnesota, and northern Wisconsin east to southern Vermont and eastern Massachusetts, and south to southeastern Iowa, southern Ohio, and southern Connecticut, and in the Appalachian Mountains south to northern Georgia. Breeding range in the Northeast and Appalachians has been decreasing in recent years, partly as a result of displacement by blue-winged warblers. Winters in Central and South America.

STATUS: Locally common.

HABITAT: Inhabits openings in deciduous forests or forest edges where there is a dense understory of forbs, grasses, or ferns. Also commonly inhabits damp fields heavily vegetated with thick grass, overgrown pastures, dense scrubby thickets, second-growth woods, and brush-bordered lowland areas. Generally occupies higher and drier areas than the blue-winged warbler, although there is a broad overlap in habitats.

SPECIAL HABITAT REQUIREMENTS: Brushy edge habitats or openings in cover with saplings, forbs, and grasses.

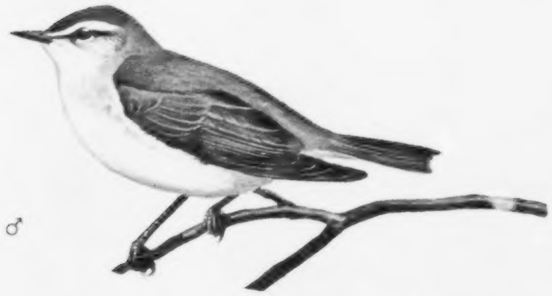
NEST: Nests in loose aggregations or colonies on or close to the ground. Usually locates nest within the shade of a forest edge, supported by weed stalks such as goldenrod, or by tufts of grass, or on a substrate of dead leaves.

FOOD: Gleans insects and spiders chickadeelike, from the ground to tree tops.

REFERENCES: Confer and Knapp 1981, DeGraff et al. 1980, Eyer 1963, Griscom and Sprunt 1979, Johnsgard 1979, Parkes in Farrand 1983c, Tate and Tate 1982.

Tennessee Warbler

Vermivora peregrina



L 4¼"

RANGE: Breeds from southeastern Alaska and southern Yukon across Canada to north-central Quebec and southern Labrador, and south to south-central British Columbia, northwestern Montana, northern Minnesota, northeastern New York, and southern Maine. Winters from Mexico to South America.

STATUS: Common.

HABITAT: In northern coniferous and deciduous woodlands, inhabits forest openings with grasses, dense shrubs, and scattered clumps of young trees, open spruce and tamarack or white cedar bogs where sphagnum moss is abundant, brushy hillsides, and occasionally dry pine lands. (Little is known about its breeding biology.)

SPECIAL HABITAT REQUIREMENTS: Brushy, semi-open country.

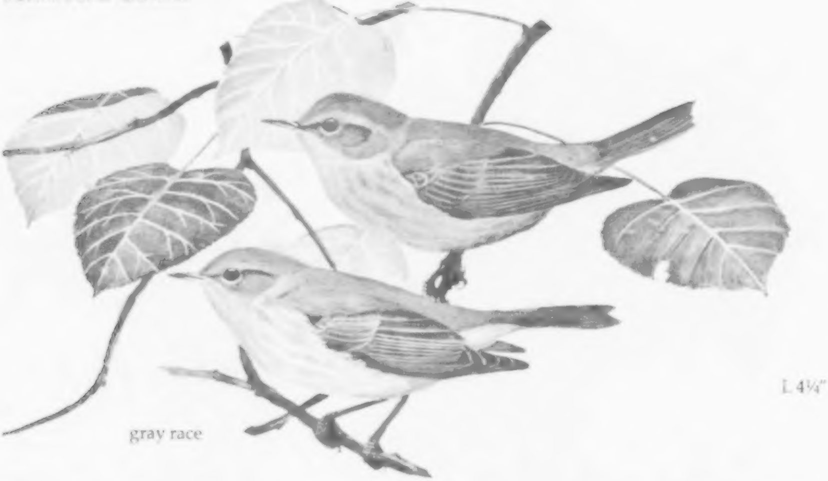
NEST: Nests singly or sometimes in loose colonies. Conceals nest on moist ground, typically in sphagnum-covered hummocks or among grasses, protected by bog plants overhead, or less frequently, on dry hillsides under the cover of shrubs or saplings.

FOOD: Forages on terminal twigs, gleaning while hopping from branch to branch, eating almost entirely insects. Also eats some spiders and fruits.

REFERENCES: Bent 1953a, DeGraff et al. 1980, Griscom and Sprunt 1979, Johnsgard 1979.

Orange-crowned Warbler

Vermivora celata



RANGE: Breeds from western and central Alaska and central Yukon across Canada to northern Ontario, central Quebec, and southern Labrador south to southwestern and central California, central Utah, southern New Mexico, and extreme western Texas, and east of the Rockies, to southern Saskatchewan, central Ontario, and south-central Quebec. Winters from coastal and southern California, central Arizona, Texas, the southern portion of the Gulf States, and South Carolina south to Central America.

STATUS: Common in the West; rare in the East.

HABITAT: Occurs in a variety of woodland and brushy habitats, especially sites with considerable shrub cover. Prefers chaparral, brushy open woods, woodland edges of low deciduous growth, burns, overgrown pastures, riparian thickets, and the edges of clearings. In Oregon, found in the mountains up to 6,000 feet, inhabiting dense mixed groves of aspen, alder, willow, and pine in meadows of subalpine parks.

SPECIAL HABITAT REQUIREMENTS: Dense shrubs for nesting.

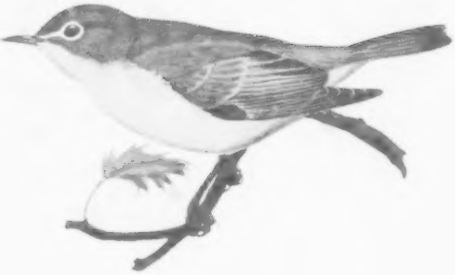
NEST: Conceals nest on the ground in a bramble tangle, hummock, at the base of a bush or stump, or occasionally up to 3 feet high in low, dense bushes.

FOOD: Gleans insects from foliage in shrubs and small trees at heights ranging from 5 to 30 feet. Also eats some spiders, leaf galls, seeds, and fruits.

REFERENCES: Bent 1953a, Griscom and Sprunt 1979, Harrison 1979, Verner and Boss 1980.

Nashville Warbler

Vermivora ruficapilla



RANGE: Breeds from southern interior British Columbia and northwestern Montana south to northwestern and south-central California and extreme west-central Nevada; and from central Saskatchewan to southern Quebec, Nova Scotia, and New Brunswick, south to southern Manitoba, southern Wisconsin, southern Michigan, northern New Jersey, and Rhode Island. Winters from southern Texas south to Mexico and Central America, rarely in California and southern Florida.

STATUS: Common.

HABITAT: Prefers brushy sphagnum bogs and open second-growth woodlands. Also occurs in regenerating areas that have been burned or cut, overgrown pastures and fields, woodland edges, and in swales, slashings, and undergrowth of mixed forests, especially those with aspen or birch. Also found in woodlands, but generally on poor sites.

SPECIAL HABITAT REQUIREMENTS: Scattered trees interspersed with brush.

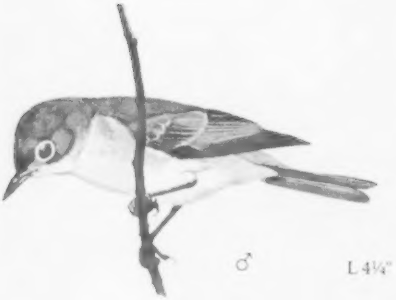
NEST: Conceals nest on the ground in a small depression, sometimes in a sphagnum hummock, often with an overhead cover of ferns or other overhanging vegetation.

FOOD: Forages from the ground to the treetops, gleaning food (chiefly insects) from the trunk, leaves, and branches, and hawking flying insects.

REFERENCES: DeGraff et al. 1980, Griscom and Sprunt 1979, Johnsgard 1979, Lawrence 1948, Petersen in Farrand 1983c.

Virginia's Warbler

Vermivora virginiae



RANGE: Breeds from east-central California, central Nevada, southeastern Idaho, and southern Wyoming south to south-central California, central and southeastern Arizona, southern New Mexico, and extreme western Texas. Winters in Mexico.

STATUS: Common.

HABITAT: Inhabits arid montane woodlands from 6,000 to 9,000 feet, preferring scrubby brush interspersed with pinyon-juniper and yellow pine. Frequents dense growths of low scrub oaks, mountain-mahogany, and chokecherry, rocky steep slopes and ravines, chaparral, riparian willow and alder thickets, and open spruce and fir forests near scrubby thickets.

SPECIAL HABITAT REQUIREMENTS: Scrubby vegetation for nesting.

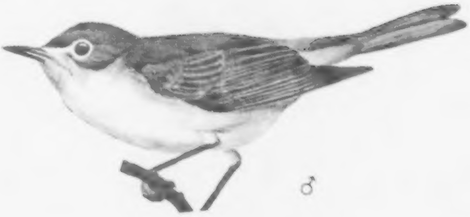
NEST: Builds nest on the ground, embedded among dead leaves or in loose soil, sometimes at the base of a bush, or hidden under a tussock of grass, but usually concealed by overhanging vegetation.

FOOD: Forages on the ground, as well as in foliage, and hawks insects on the wing.

REFERENCES: Bent 1953a, Griscom and Sprunt 1979, Terrill in Farrand 1983c, Van Tyne 1936.

Colima Warbler

Vermivora crissalis



L 4¼"

RANGE: Breeds in the Chisos Mountains in extreme western Texas and northern Mexico. Winters in Mexico.

STATUS: Rare and local.

HABITAT: Inhabits forested canyons and slopes between 6,000 and 7,000 feet, where it frequents thickets of young maples and oaks along dry stream beds, clumps of small oaks along mountain slopes, and mixed woods of maple, oak, Arizona cypress, and yellow pine.

SPECIAL HABITAT REQUIREMENTS: Oak thickets above 6,000 feet.

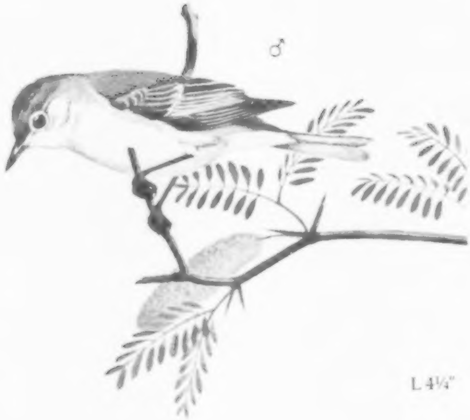
NEST: Nests on the ground among fallen leaves and vines, which may partly or completely conceal the nest. Locates nest on rocky slopes, or adjacent to dry stream beds among small rocks and leaves where there are clumps of small oaks.

FOOD: Occupies the lower tree branches and forages for caterpillars and other insects in Arizona cypress and neighboring vegetation. (No food studies on this species in the United States.)

REFERENCES: Blake 1949, Griscom and Sprunt 1979, Oberholser 1974b, Van Tyne 1936.

Lucy's Warbler

Vermivora luciae



RANGE: Breeds from southeastern California, southern Nevada, and Utah south to southern Arizona, northern Mexico, and extreme western Texas. Winters in western Mexico.

STATUS: Common.

HABITAT: Found in southwestern deserts, generally wherever there are large mesquites, especially along main watercourses. Also occurs in mountain foothills in streamside cottonwoods and willows.

SPECIAL HABITAT REQUIREMENTS: Cavities for nesting.

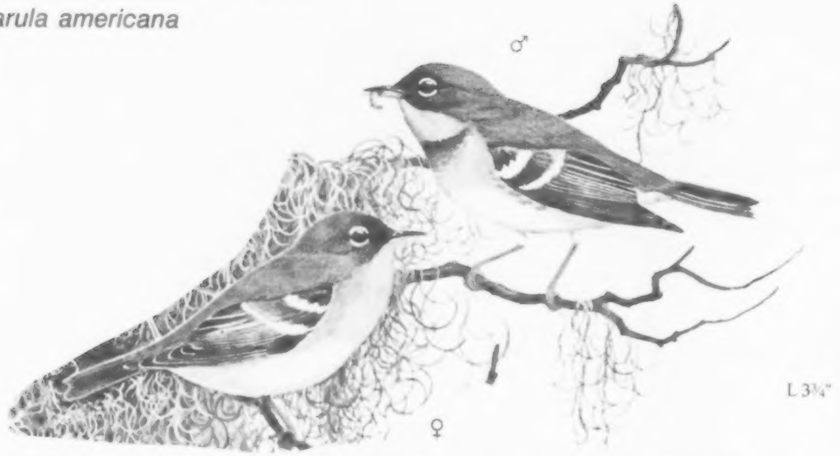
NEST: The only cavity-nesting warbler besides the prothonotary, places nest in four types of cavities; natural cavities in trees (usually mesquite), where the entrance is in a sheltered spot; under loose bark; in abandoned woodpecker holes; and in deserted verdin nests. Generally locates nest 5 to 6 feet above the ground, but ranges from 1 to 15 feet. Occasionally nests in holes in banks, in yuccas, willows, sycamores, or elderberries.

FOOD: Forages for insects at middle heights in mesquite, seldom in the treetops or near the ground.

REFERENCES: Bent 1953a, Griscom and Sprunt 1979.

Northern Parula

Parula americana



RANGE: Breeds from southeastern Manitoba and central Ontario east to New Brunswick south to south-central and southern Texas, the Gulf Coast, and Florida, and west to the eastern edge of the Plains States. Winters in Florida and from Mexico to Central America.

STATUS: Common.

HABITAT: Primarily associated with swampy woods, especially in the Southeast, where it inhabits mature coniferous and deciduous woodlands where mosslike lichens or Spanish moss are found. In the North, found in swamps and bogs with abundant bearded lichens; in the South, frequents trees draped with Spanish moss. Occasionally occurs in woodlands without moss or lichens.

SPECIAL HABITAT REQUIREMENTS: Bearded lichen *(Usnea)* or Spanish moss *(Tillandsia)* for nesting material or for nest sites.

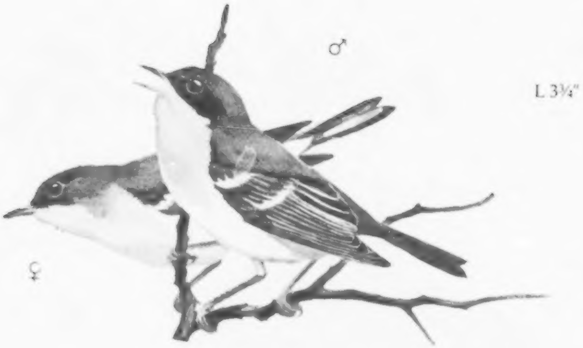
NEST: Usually suspends nest near the tip of a tree limb that is covered with *Usnea* or *Tillandsia* at heights averaging 10 feet, but ranging from 6 to 100 feet above the ground. Conceals nest with moss or lichen, and constructs it of these materials as well. In areas where they are not available, uses other materials.

FOOD: Forages in a chickadeelike fashion, gleaning insects and spiders from twigs and foliage.

REFERENCES: Bent 1953a, DeGraff et al. 1980, Graber and Graber 1951, Griscom and Sprunt 1979, Johnsgard 1979.

Tropical Parula

Parula pitiayumi



RANGE: Resident from southern Texas in the lower Rio Grande Valley north to near Kingsville, Texas and south locally through Central America into South America. Widespread but local in tropics; largely withdraws in winter from northern limits of range.

STATUS: Scarce; once common, the population in southern Texas has declined, probably because of loss of prefered habitat, pesticide pollution, and the greatly expanded population of bronzed cowbirds.

HABITAT: Found in dense or open woodlands; inhabits undergrowth, brush and trees along the edges of rivers, low dry woodlands, and semiarid cultivated valleys with scattered trees. Breeds from near sea level to 200 feet in elevation in southern Texas, preferring habitats with trees whose branches are draped with Spanish moss.

SPECIAL HABITAT REQUIREMENTS: Air plants (epiphytes) such as Spanish moss for nesting.

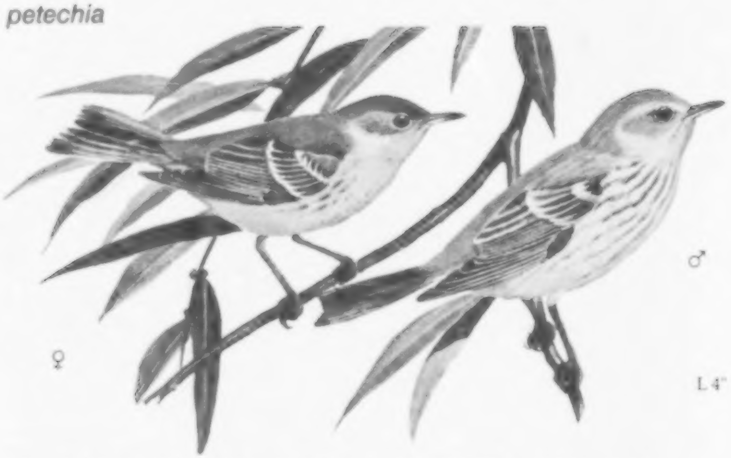
NEST: Builds nest 8 to 10 feet above the ground in a hollow formed by a mass of Spanish moss or other air plants that hang in trees or bushes. Nests on relatively level land along rivers and streams, in tall brush or timber.

FOOD: Mostly eats insects. (Little is known about the diet in the United States.)

REFERENCES: Bent 1953a, Griscom and Sprunt 1979, Kaufman in Farrand 1983c, Oberholser 1974b.

Yellow Warbler

Dendroica petechia



RANGE: Breeds from northwestern and north-central Alaska and northern Yukon to northern Ontario, central Quebec, and southern Labrador south to Mexico, central and northeastern Texas, northern Arkansas, central Georgia, and central South Carolina. Winters from southern California, southwestern Arizona, Mexico, and southern Florida south to South America. Also resident in southern Florida.

STATUS: Common; significant population declines in Idaho and the Dakotas, and numbers are declining in many other areas.

HABITAT: Prefers moist habitats such as willow- and alder-lined streams and ponds, brushy bogs, and the edges of marshes, swamps, or creeks. Also occurs in dry sites such as hedgerows, roadside thickets, orchards, farmlands, forest edges, and suburban yards and gardens. Generally occurs wherever patches of trees or shrubs grow, but avoids heavy forests. In the Florida Keys, only inhabits coastal mangroves.

SPECIAL HABITAT REQUIREMENTS: Small scattered trees or dense shrubbery.

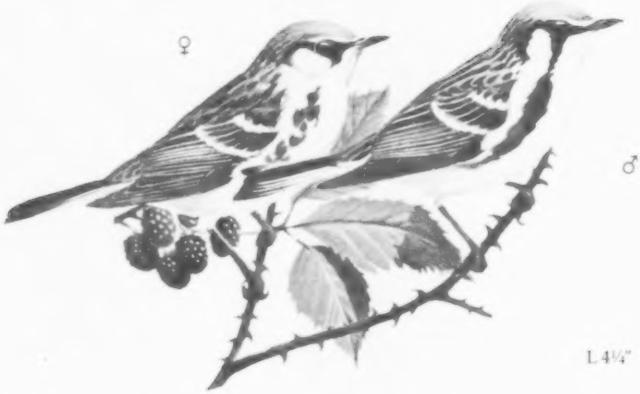
NEST: Usually builds nest in an upright fork or crotch of a tree or bush, typically 3 to 8 feet, occasionally up to 40 feet, above the ground. May nest colonially in ideal habitats. Frequently victimized by cowbirds; builds up the nest lining to cover the cowbird eggs.

FOOD: Forages for insects and spiders on the limbs of shrubs and trees by gleaning and hawking.

REFERENCES: Bent 1953a, Bigglestone 1913, DeGraff et al. 1980, Griscom and Sprunt 1979, Johnsgard 1979, Schrantz 1943, Tate and Tate 1982, Vickery in Farrand 1983c.

Chestnut-sided Warbler

Dendroica pensylvanica



RANGE: Breeds from east-central Alberta and central Saskatchewan to southern Quebec and New Brunswick south to eastern Colorado, Iowa, central Ohio, and Massachusetts; in the Appalachians south to north-central Georgia and northwestern South Carolina. Winters from Mexico to Panama, casually to South America.

STATUS: Common.

HABITAT: Inhabits rather open and dry areas having some woody vegetation in the form of shrubs and small trees, preferring the brushy regrowth of clear-cut forests and abandoned pastures and fields. Also frequents second-growth woodland edges and clearings, low shrubbery, briar thickets, brushy hillsides and brooksides, and roadside thickets.

SPECIAL HABITAT REQUIREMENTS: Early second-growth moist woodlands with dense vegetation about 3 feet above the ground to provide nest sites and foraging areas.

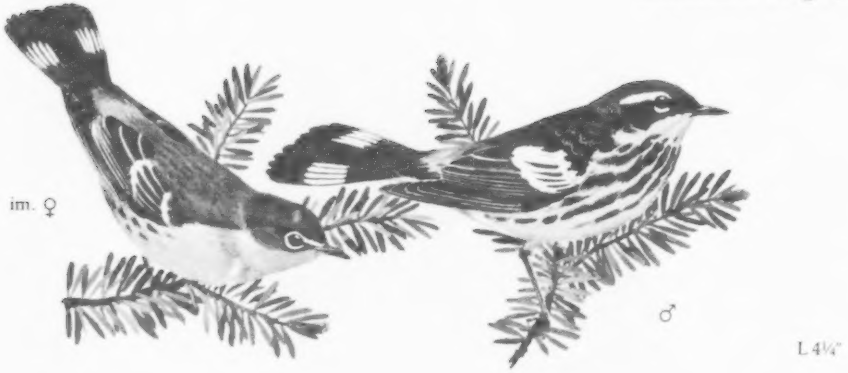
NEST: Conceals nest from 1 to 4 feet above the ground in briar thickets, bushes, saplings, or vines, such as spirea, raspberry, red-osier dogwood, azalea, laurel, gooseberry, meadow-rue, and hazel.

FOOD: Consumes insects and spiders gleaned from the foliage of shrubs and other low plants, or caught by flycatching. Occasionally eats a few seeds and berries.

REFERENCES: Cripps 1966, Griscom and Sprunt 1979, Lawrence 1948, Tate 1970, Terres 1980, Vickery in Farrand 1983c.

Magnolia Warbler

Dendroica magnolia



RANGE: Breeds from northeastern British Columbia, west-central and southern Mackenzie east to north-central Manitoba and south-central and eastern Quebec, and south to south-central British Columbia, central Saskatchewan, northeastern Minnesota, central Michigan, western Virginia, northwestern New Jersey, and Connecticut. Winters from Mexico to Panama.

STATUS: Common.

HABITAT: Inhabits open coniferous or mixed coniferous-deciduous woodlands, preferring spruce and fir forests with low trees, and coniferous bogs. Also inhabits dense thickets of spruce and fir, old clearings with small coniferous saplings, second-growth following logging, woodland edges, and coniferous thickets along roadsides.

SPECIAL HABITAT REQUIREMENTS: Young conifer stands for nesting.

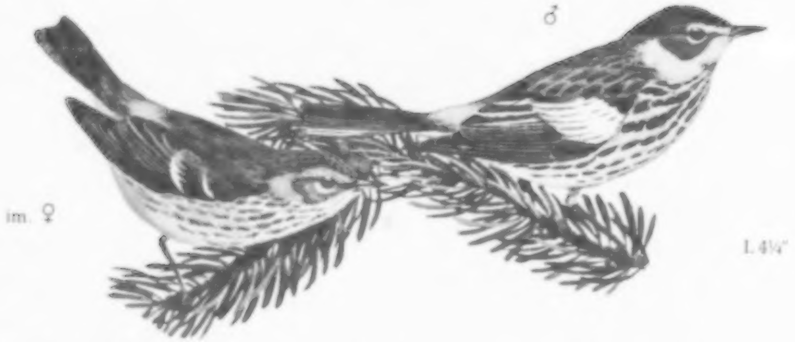
NEST: Conceals nest in a small conifer, in foliage near the tip of a horizontal branch, generally 1 to 8 feet, but typically less than 5 feet, above the ground. Prefers spruce, fir, and hemlock for nesting, but may use hardwoods.

FOOD: Tends to forage near the center of a tree for insects, rather than at the outer edges; almost entirely insectivorous.

REFERENCES: Bent 1953a, DeGraff et al. 1980, Griscom and Sprunt 1979, Johnsgard 1979, Petersen in Farrand 1983c.

Cape May Warbler

Dendroica tigrina



RANGE: Breeds from southwestern and south-central Mackenzie and northeastern British Columbia east to central Ontario, southern Quebec and New Brunswick south to central Alberta, southeastern Manitoba, northern Wisconsin, southern Ontario, northeastern New York, and east-central Maine. Winters in central and southern Florida and the West Indies.

STATUS: Uncommon.

HABITAT: Inhabits fairly open coniferous forests, especially those with a high percentage of mature spruce. Also frequents dense spruce forests with a scattering of tall spires extending above the canopy level, the edges of coniferous forests, especially if birches or hemlocks are present, and in more open land among small trees. Will occasionally proliferate in areas heavily infested with spruce budworms.

SPECIAL HABITAT REQUIREMENTS: Tall conifer trees, especially spruce, for nesting.

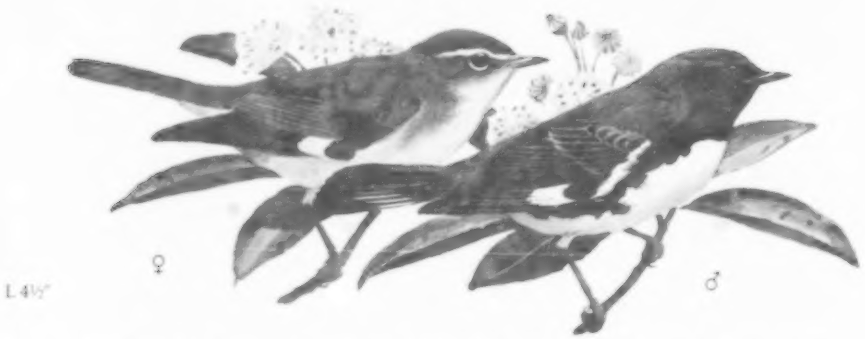
NEST: Builds nest invariably in the uppermost clump of thick foliage near the top of tall conifers, generally invisible from below. (Little is known about the nesting biology of this species, mainly because it tends to nest so high in conifers, and females tend to land near the tree base and move up through the tree rather than fly to the nest.)

FOOD: Consumes insects caught by flycatching or gleaning the tips of dense branches and new buds of conifers near the tops of trees. Also eats spiders and occasionally vineyard grapes.

REFERENCES: Bent 1953a, DeGraff et al. 1980, Griscom and Sprunt 1979, Johnsgard 1979, Petersen in Farrand 1983c.

Black-throated Blue Warbler

Dendroica caerulescens



RANGE: Breeds from western and central Ontario to New Brunswick south to northeastern Minnesota, central Michigan, northeastern Pennsylvania, and southern New England, and in the Appalachians to northeastern Georgia and northwestern South Carolina. Winters primarily from southern Florida to the West Indies, casually in Central and South America.

STATUS: Common.

HABITAT: Prefers northern hardwood forests with an ample undergrowth of saplings and evergreen or deciduous shrubs. Also inhabits mature coniferous-deciduous forests, especially those with an undergrowth of creeping yew, laurel, hazel, maple, or brushy saplings. In the southern Appalachians, often inhabits dense mountain-laurel thickets.

SPECIAL HABITAT REQUIREMENTS: Woodlands with shrubby undergrowth.

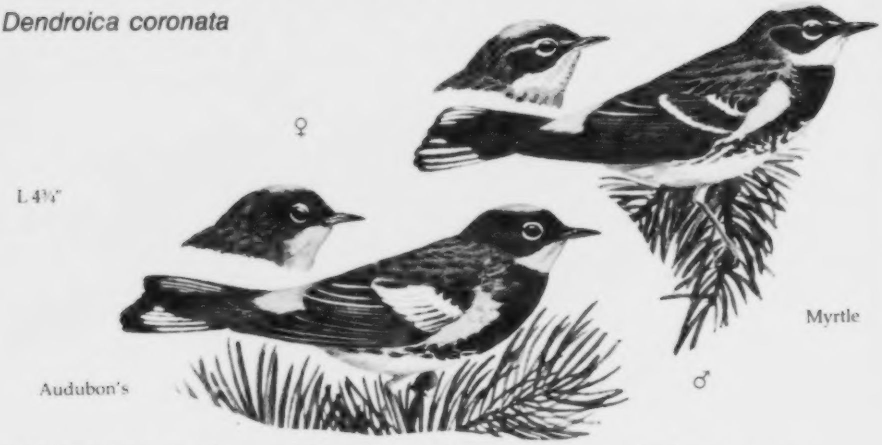
NEST: Constructs well-concealed nest near the ground, generally not higher than 3 feet above ground, in fallen tree tops, small trees, or shrubs. Partial to nesting in rhododendron, laurel, hemlock, small spruce, fir, and maple.

FOOD: Forages in the shrub, subcanopy, and lower canopy layers of forests, gleaning insects from foliage and branches. Mostly consumes insects but occasionally eats seeds and berries.

REFERENCES: Bent 1953a, DeGraff et al. 1980, Griscom and Sprunt 1979, Harding 1931, Johnsgard 1979, Petersen in Farrand 1983c.

Yellow-rumped Warbler

Dendroica coronata



RANGE: The northern and eastern (Myrtle) race breeds from western Alaska and central Mackenzie to north-central Labrador south to northern British Columbia, southeastern Saskatchewan, central Michigan, and Massachusetts, and in the Appalachians to eastern West Virginia. The western (Audubon's) race breeds from central British Columbia and southwestern Saskatchewan south to southern California across to western Texas. The Myrtle race winters from southwestern British Columbia through the Pacific States, southern Arizona, and Colorado, and from Kansas east across the central United States to New England, and south to Panama. The Audubon's race winters from southwestern British Columbia and Idaho south to Central America.

STATUS: Common.

HABITAT: Generally inhabits coniferous forests throughout its range, but also found in aspen forests in the Rocky Mountains. In the West, prefers timbered sites with a low percent canopy cover, and forest edges such as those around meadows or lakes. In the East, prefers spruce-fir woodlands, but also frequents young coniferous growth near the edges of woods, mixed woods, and evergreen plantations.

SPECIAL HABITAT REQUIREMENTS: Coniferous trees for nesting.

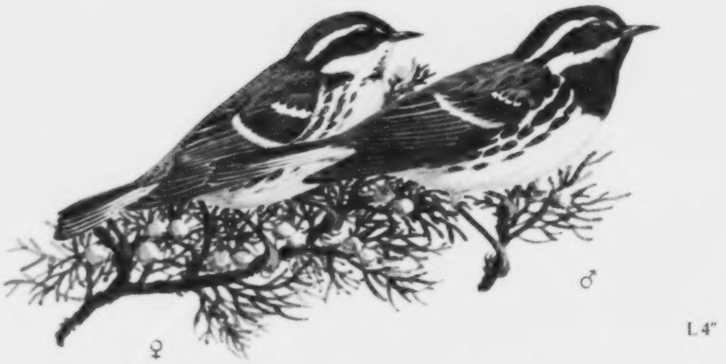
NEST: Builds nest well out on a horizontal branch in a conifer tree, screened from above by clumps of needles. Typically locates nest 15 to 20 feet above the ground, but sometimes 4 to 50 feet.

FOOD: Eats insects gleaned from foliage and caught by hawking. Also searches for food on the ground. In winter, largely subsists on berries.

REFERENCES: Beal and McAtee 1912, Bent 1953a, DeGraff et al. 1980, Griscom and Sprunt 1979, Johnsgard 1979, Kaufman in Farrand 1983c, Verner and Boss 1980.

Black-throated Gray Warbler

Dendroica nigrescens



RANGE: Breeds from southwestern British Columbia and western Washington to northern Utah and southern Wyoming south, primarily in mountains, to northern Baja California, central and southeastern Arizona, extreme western Texas, and Mexico. Winters from coastal southern California and southern Arizona south to Mexico.

STATUS: Common.

HABITAT: In the northern portion of its range, inhabits conifer forests that are open and interspersed with shrubs or forest edges. Farther south, seems to prefer shrubby stands of oaks, pinyon, juniper, and manzanita. Throughout its range, prefers and is perhaps limited to dry slopes.

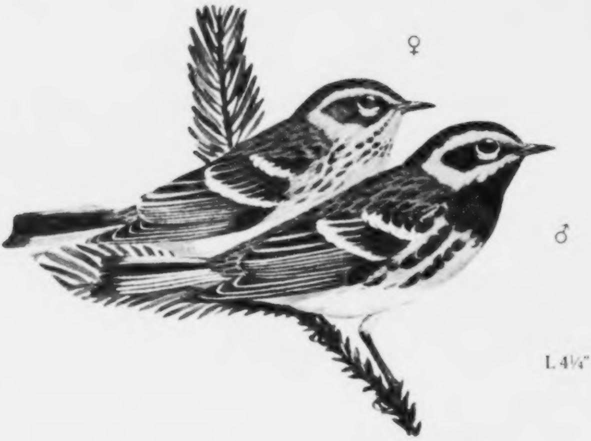
NEST: In Washington, seems to nest exclusively in fir trees, placing nest on horizontal branches 7 to 50 feet above the ground. In habitats further south, builds nests in shrubs such as manzanita, oak, ceanothus, or large white oaks and sycamores.

FOOD: Forages among the leaves of shrubs for insects. (Detailed food habits have not been reported.)

REFERENCES: Bent 1953a, Griscom and Sprunt 1979, Phillips et al. 1964.

Townsend's Warbler

Dendroica townsendi



RANGE: Breeds from east-central Alaska, southern Yukon, and coastal British Columbia, as well as parts of Alberta and Saskatchewan, south along the Pacific Coast into northwestern Washington, and inland to central and southeastern Washington, central and northeastern Oregon, northern Idaho, northwestern and south-central Montana, and northwestern Wyoming. In general, breeding distribution follows that of conifers and mixed coniferous-deciduous forests. Winters in the coastal region of Oregon and California south through the highlands of Mexico and Central America to Costa Rica.

STATUS: Common in coniferous forests of the Pacific Northwest.

HABITAT: During breeding season, primarily inhabits tall coniferous forests of the Pacific Northwest, most commonly the more mountainous regions, usually near the crowns of tall trees. During migration and winter, moves into humid forests as well as pine-oak associations, open woodlands, and second-growth scrub forests.

SPECIAL HABITAT REQUIREMENTS: Tall, coniferous forests of the north Pacific Coast.

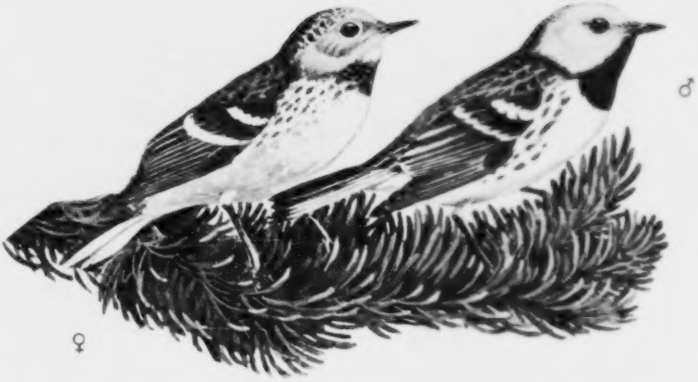
NEST: Nests in conifers, particularly firs, generally on the limb of the tree and not in the fork or crotch. Constructs nests of bark and slender twigs woven together, usually places them near the crowns of trees. In shorter trees, places nests as close as 10 or 12 feet to the ground.

FOOD: Consumes insects found on the needles of conifers as primary diet during spring and summer. (Winter food habits are not well documented.)

REFERENCES: Bent 1953a, Griscom and Sprunt 1979.

Hermit Warbler

Dendroica occidentalis



L 4¼"

RANGE: Breeds in coniferous forests from southern British Columbia south through the coastal ranges and Sierra Nevadas to southern California. Winters in Mexico and Central America. In general, distribution coincides with tall coniferous trees.

STATUS: Uncommon and local in summer habitats.

HABITAT: Uses very tall conifers, including Douglas-fir and cedar. Prefers scattered groups of tall trees (sometimes 200 or more feet tall) that tower above the rest of the forest. Generally found in the upper canopies of tall trees, and though very active, are often difficult to identify.

SPECIAL HABITAT REQUIREMENTS: Tall coniferous trees.

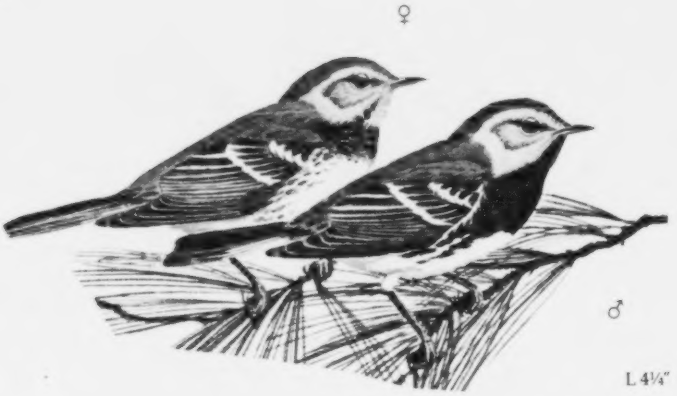
NEST: Builds a well-concealed nest, generally supported by needles on the scraggly limbs of conifers, often up to 40 or 50 feet above the ground. Generally forage on the upper portions of trees, while nests are built in the mid-canopy of some of the tall trees.

FOOD: Feeds on a variety of insects found in the upper level of coniferous trees, gleaning them from needles and twigs, or hawking flying insects.

REFERENCES: Bent 1953a, Griscom and Sprunt 1979.

Black-throated Green Warbler

Dendroica virens



RANGE: Breeds from east-central British Columbia and northern Alberta to central Ontario and Newfoundland south to central Alberta, southern Manitoba, central Minnesota, Pennsylvania, and northern New Jersey, and south in the mountains to northern Alabama and Georgia. Winters from southern Texas and southern Florida south to Central America and the West Indies.

STATUS: Common.

HABITAT: Inhabits open mixed woodlands (especially northern hardwood-hemlock stands), northern coniferous forests with large trees, and larch bogs. Less often, inhabits second-growth hardwoods and pastures with cedars. It occurs rather commonly in pine barrens in Maine and jack pines in Michigan.

SPECIAL HABITAT REQUIREMENTS: Some coniferous cover.

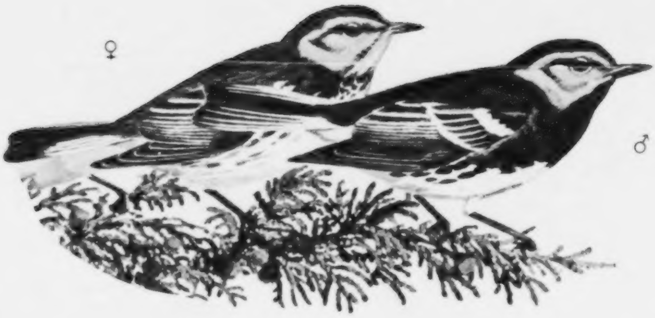
NEST: Builds a compact, deep cup nest, usually placed on a branch or in a fork of a conifer tree, 3 to 80 feet above the ground; occasionally uses a deciduous tree.

FOOD: Largely consumes insects gleaned from leaves and branches, and occasionally hawks flying insects.

REFERENCES: Griscom and Sprunt 1979, Harrison 1975, Pitelka 1940, Terres 1982.

Golden-cheeked Warbler

Dendroica chrysoparia



L 4¾"

RANGE: Breeds from central Texas south to the Edward's Plateau region into Medina and Bexar Counties and west to Real and Kerr Counties. Winters in the highlands of Central America. Occasionally visits the Farallon Islands of California and isolated areas of Florida.

STATUS: Uncommon and very local.

HABIAT; Prefers small stands of mountain-cedar on rough woody hillsides in canyons or on ridges that separate headwaters of streams, and also inhabits mountain oak, black oak, and live oak thickets on higher grounds as well as oak thickets on the lower flats along the foothills. Populations have been eliminated by removal of "cedar brakes." Mature cedar brakes ranging from several hundred acres to a thousand or more are necessary to insure habitat for this specie.

SPECIAL HABITAT REQUIREMENTS: Mountain-cedar in canyons or draws within 1-1/2 miles of water.

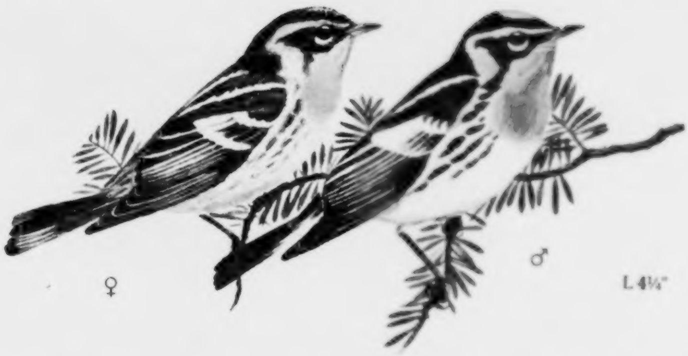
NEST: Builds nests of cedar bark interspersed with webs, often from spiders. Fastens nests to limbs in the mid-canopy level of mountain-cedars and are difficult to locate because they resemble the bark of the tree. Often parasitized by cowbirds.

FOOD: Eats a variety of insects and spiders.

REFERENCES: Griscom and Sprunt 1979, Oberholser 1974b, Pulich 1976.

Blackburnian Warbler

Dendroica fusca



RANGE: Breeds from central Alberta east to southern Quebec and Nova Scotia south to southern Manitoba, northeastern Ohio, Pennsylvania, and southeastern New York, and in the Appalachians to South Carolina and northern Georgia. Winters in Central and South America.

STATUS: Common.

HABITAT: Throughout most of its range, favors mature conifer forests with a few deciduous trees, preferring the upper canopy of tall conifers. Also inhabits climax stands of conifers with sparse understory and with deciduous trees and shrubs around the edges. In the Appalachians, inhabits oak-hickory forests along ridges.

SPECIAL HABITAT REQUIREMENTS: Tall coniferous forests; oaks in the Appalachians.

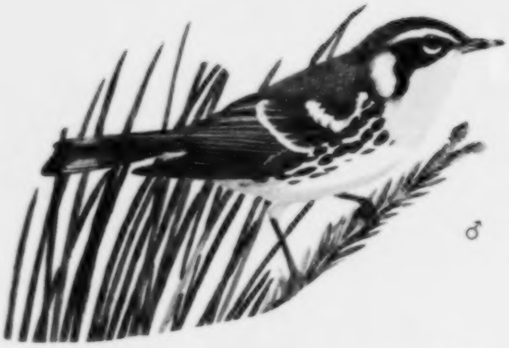
NEST: Builds a deeply cupped nest saddled to a horizontal branch of a large tree. Nests in conifers throughout its range but also uses deciduous trees in the South. Usually locates nest high (up to 80 feet) above the ground and well out from the tree trunk.

FOOD: Consumes mostly insects gleaned from branches and leaves, but also flying insects caught in the air. Eats some berries when insects are scarce.

REFERENCES: Bull and Farrand 1977, Griscom and Sprunt 1979, Lawrence 1953b, Terres 1982.

Yellow-throated Warbler

Dendroica dominica



L 4½"

RANGE: Breeds from southeastern Kansas, central Ohio, and central New Jersey south to south-central and eastern Texas, the Gulf Coast, central Florida, and the northern Bahama Islands. Wanders north to the Great Lakes and the Maritime Provinces. Winters from southeastern Texas, the Gulf Coast, and South Carolina south to Costa Rica.

STATUS: Common in southeastern United States.

HABITAT: Generally inhabits large trees along river banks, swamps, and bottomlands, as well as open stands of pines, live oaks, and mixed forests. In the South, prefers forests with abundant Spanish moss. Tends to utilize the upper canopy level of the forests.

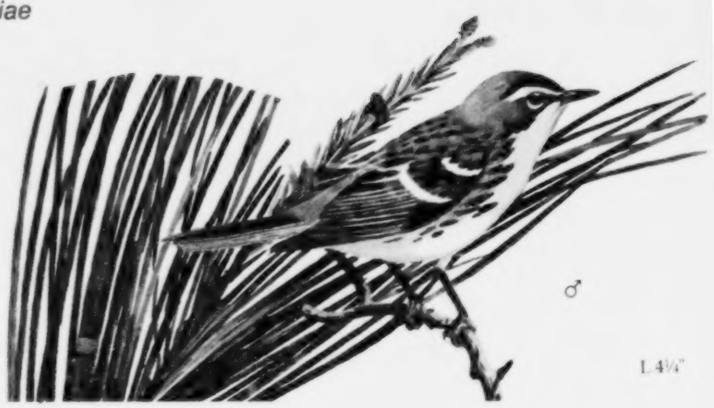
NEST: In coastal areas, nearly always builds nest in clumps of Spanish moss. In areas with no Spanish moss, saddles nest on a horizontal branch. Locates nests 10 to 100 feet above the ground, generally far out from the tree trunk.

FOOD: Is a skillful "fly catcher," but gleans much of its food from leaves and branches; eats nearly all insects.

REFERENCES: Bull and Farrand 1977, Griscom and Sprunt 1979, Harrison 1975, Johnsgard 1979, Sykes in Farrand 1983, Terres 1982.

Grace's Warbler

Dendroica graciae



RANGE: Breeds from southern Nevada, southern Utah, southwestern Colorado, northern New Mexico, and western Texas south through the mountains of western Mexico to Nicaragua. Winters in northern Mexico; resident from central Mexico southward.

STATUS: Locally common in pine-oak forests above 7,000 feet.

HABITAT: Typically inhabits pine forests, usually in the upper portions of yellow pines. Sometimes inhabits hemlock and fir woodlands, and occasionally oak thickets; generally from 6,000 to 9,000 feet.

SPECIAL HABITAT REQUIREMENTS: Pine forests approximately 7,000 feet in elevation.

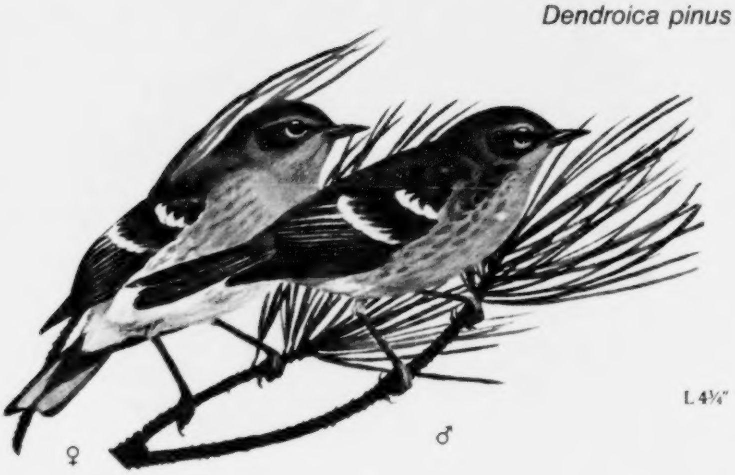
NEST: Locates nest on limbs of pine trees up to 60 feet above the ground, sometimes in the middle of bunches of pine needles. Builds a very compact nest composed of a variety of grass fibers, hair, vegetable material, and insect webbing, often hidden from view.

FOOD: Commonly gleans food (almost entirely insects) from leaves and branches of pines, as well as hemlocks and spruces. Most commonly forages in the very upper canopies of the tree, but sometimes catches flying insects on the wing.

REFERENCES: Griscom and Sprunt 1979.

Pine Warbler

Dendroica pinus



RANGE: Breeds from southern Manitoba, western Ontario, southwestern Quebec, and central Maine south to eastern Texas, the Gulf Coast, southern Florida, and the Bahamas. Rare or absent in the upper Mississippi and Ohio River Valleys. Winters in the southeastern United States south to southern Texas, the Gulf Coast, and southern Florida into Mexico.

STATUS: Common to rare and local.

HABITAT: Inhabits open pine forests and pine barrens, especially jack pine in Minnesota and upland southern pines. Generally avoids tall, moist, and dense coniferous forests.

SPECIAL HABITAT REQUIREMENTS: Open pine forests.

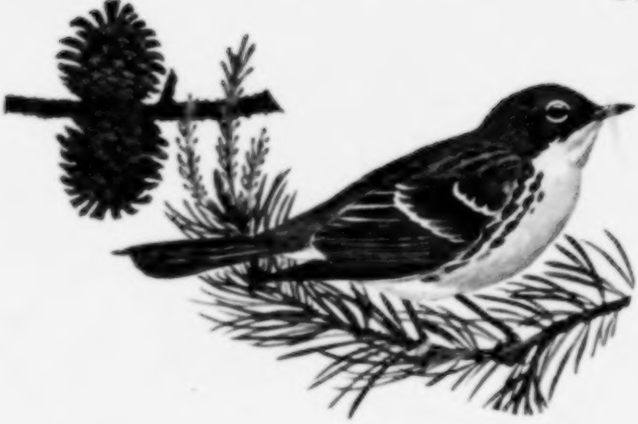
NEST: Builds nests saddled on horizontal limbs of conifers 8 to 80 (usually 30 to 50) feet above the ground, usually far out from the tree trunk and well concealed in foliage.

FOOD: Gleans its food from tree trunks, larger branches, and leaves. In the summer, mostly eats insects and some spiders. In winter, also eats pine seeds, wild fruits and berries, and grass and weed seeds.

REFERENCES: Bull and Farrand 1977, Griscom and Sprunt 1979, Harrison 1975.

Kirtland's Warbler

Dendroica kirtlandii



RANGE: Breeds only in extensive tracts of small jack pines in a few counties of northern lower Michigan. Occasionally strays to similar habitats in Wisconsin, southern Ontario, and southern Quebec if not breeding. Winters throughout the Bahamas.

STATUS: Endangered. Approximately 1,000 birds in existence.

HABITAT: Breeds in very specific habitats: extensive stands (80 + acres) of young jack pine that are 6 to 20 feet tall and have living pine branches near the ground. Usually moves into burned-over jack pine forests 6 to 13 years after fire and inhabits these young forests for 10 to 12 years.

SPECIAL HABITAT REQUIREMENTS: Dense stands of young jack pine.

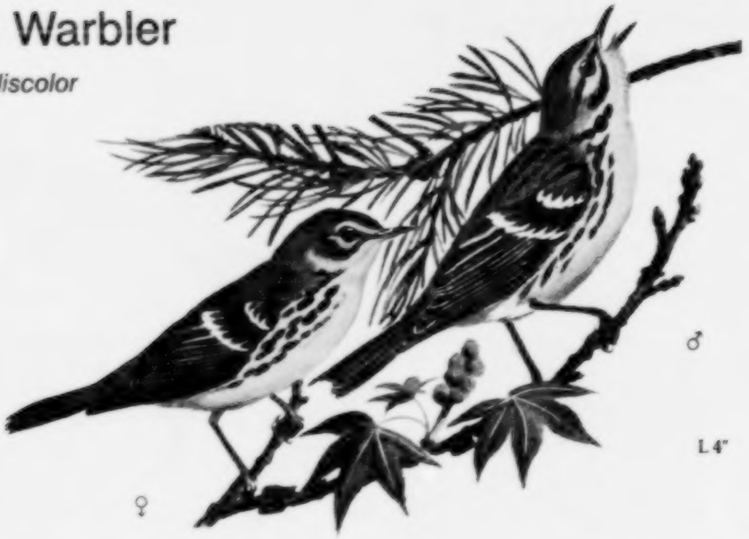
NEST: Tends to nest in loose colonies. Conceals nest under low vegetation (particularly bluestem grass and blueberry) near the base of a small jack pine on flat, dry, porous soil, usually depressed below ground level; about half of nests are parasitized by brown-headed cowbirds.

FOOD: Gleans food (mostly insects) from the ground and pine needles.

REFERENCES: Griscom and Sprunt 1979, Mackenzie 1977, Mayfield 1960.

Prairie Warbler

Dendroica discolor



RANGE: Breeds from eastern Nebraska, central Missouri, northern Illinois, central Wisconsin, northern Michigan, southern Ontario, southeastern New York and New Hampshire south to eastern Texas , the Gulf Coast and southern Florida. Winters from central Florida south to the West Indies and Central America.

STATUS: Common.

HABITAT: Generally inhabits open brushy lands, often in mixed pine and scrub oak woodlands. Also inhabits southern pine forests, sand dunes, mangroves, and jack pine plains but tends to avoid dense forests. (Suitable habitats have increased on abandoned farms, unmowed orchards, strip mine lands, Christmas tree farms, and burned and grazed woodlands.)

SPECIAL HABITAT REQUIREMENTS: Low trees and shrubs; tends to favor areas with some conifers.

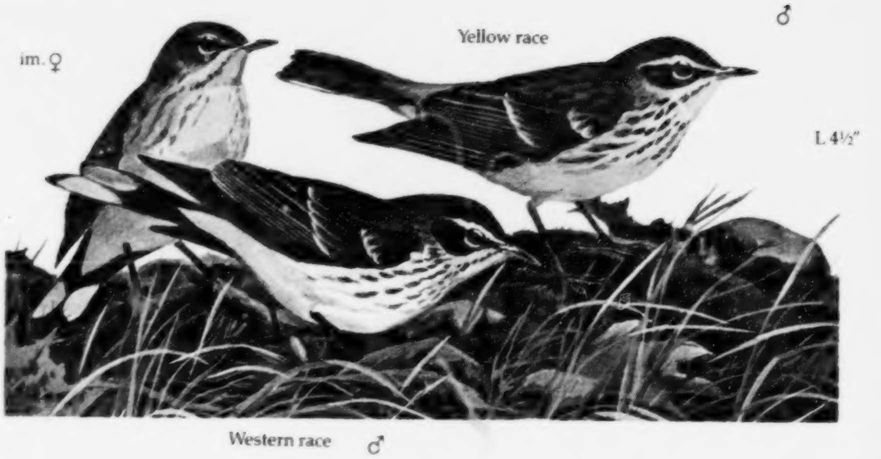
NEST: Sometimes nests in loose colonies. Attaches well-concealed cup nest to stems and branches of a variety of shrubs and trees, usually 2 to 3 feet above the ground.

FOOD: Gleans food from tree leaves, branches, and the ground, but also catches flying insects in the air. Eats mostly insects, but also eats some snails and worms.

REFERENCES: Griscom and Sprunt 1979, Nolan 1978.

Palm Warbler

Dendroica palmarum



RANGE: Breeds from southern Mackenzie and northern Alberta to central Quebec and southern Newfoundland south to northeastern British Columbia, central Alberta, northern Minnesota, southern Quebec, Maine, and Nova Scotia. Winters mostly from north-central Texas to North Carolina south to southern Texas, the Gulf Coast, southern Florida, and islands in the Caribbean.

STATUS: Fairly common.

HABITAT: Inhabits boggy areas dominated by tamarack, black spruce, and white cedar, and dry, open forests of spruce or jack pine.

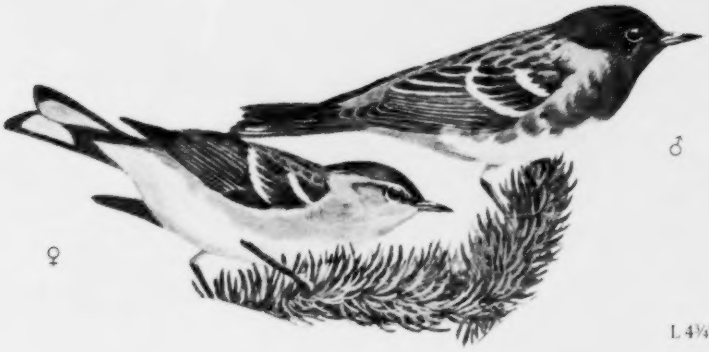
NEST: Sometimes nests in loose colonies. Usually builds nest on the ground, nearly buried in sphagnum mosses, but may nest in the low branches of conifer saplings.

FOOD: Forages on the ground, gleans food from twigs and conifer cones, and also catches flying insects. Mainly eats insects, but also some vegetable matter, especially barberries during winter.

REFERENCES: Bent 1953b, Griscom and Sprunt 1979.

Bay-breasted Warbler

Dendroica castanea



RANGE: Breeds from southwestern Mackenzie to north-central Saskatchewan and Newfoundland south to northeastern British Columbia, southern Manitoba, and northeastern Minnesota to southern Maine. Winters in northern South America.

STATUS: Fairly common.

HABITAT: Inhabits northern coniferous forests or mixed forests, favoring young spruce and fir. Also found in woodlands bordering streams, along fence rows and highways, and in mixed woods around ponds and lakes. During migration, uses all types of woodlands but prefers conifers.

SPECIAL HABITAT REQUIREMENTS: Early stages of second-growth conifer forests.

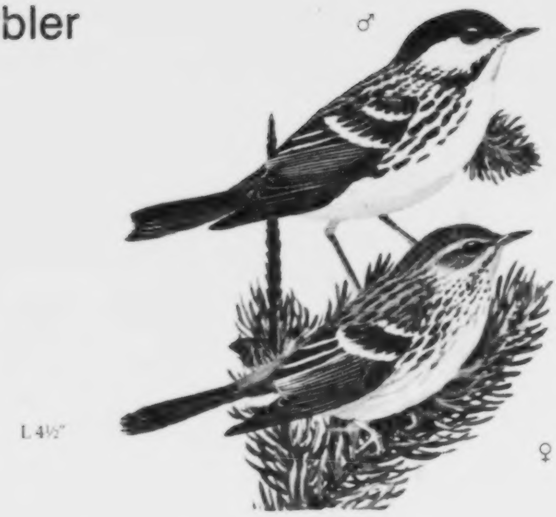
NEST: Usually saddles nest on a horizontal branch of a conifer, 4 to 40 feet above the ground, well out from the tree trunk.

FOOD: Forages among the middle and upper branches of small conifers to glean food from needles and flowers. Eats mostly insects; occasionally eats berries such as Virginia creepers and mulberries in the fall.

REFERENCES: Griscom and Sprunt 1979, Harrison 1975, Mendall 1937.

Blackpoll Warbler

Dendroica striata



RANGE: Breeds from western and north-central Alaska throughout most of central Canada around the lower part of Hudson Bay to the Atlantic Coast, coincidental with boreal forests. Migrates south across the eastern United States and winters in South America.

STATUS: Common throughout the north-central boreal forests.

HABITAT: Inhabits northern coniferous forests, favoring stunted, young or medium-sized conifers, especially the upper canopy. Migrates primarily at night and is often attracted to bright lights. (Probably one of the most common species seen in migration, when large numbers are found in gardens and parks.)

SPECIAL HABITAT REQUIREMENTS: Northern coniferous forests. Requires conifers for nesting and prefers spruce.

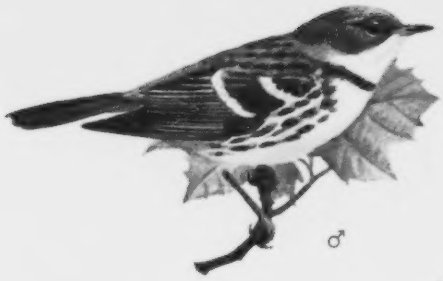
NEST: Builds a generally bulky nest of a variety of twigs, bark, and sometimes moss and grass, lined usually with plant fiber, grass, hair, and rootlets. Often locates nest 2 to 7 feet above the ground, usually near the trunk of a tree, supported by horizontal branches, and quite well concealed.

FOOD: Primarily eats insects, gleaning adults and larvae from leaves and twigs, and catching insects in flight. Probes into galls and other protusions of trees and will also eat seeds and berries in the fall.

REFERENCES: Griscom and Sprunt 1979.

Cerulean Warbler

Dendroica cerulea



L 4"

RANGE: Breeds from southeastern Minnesota, southern Wisconsin, southern Michigan, Ontario, New York, and western New England south to northeastern Texas, southeastern Louisiana, Mississippi, Alabama, and central North Carolina. Winters in South America.

STATUS: Locally common.

HABITAT: Favors moist deciduous swamp and bottomland forests and shady, mature upland woods. Prefers rather open forests with tall trees and little undergrowth.

SPECIAL HABITAT REQUIREMENTS: Tall deciduous trees.

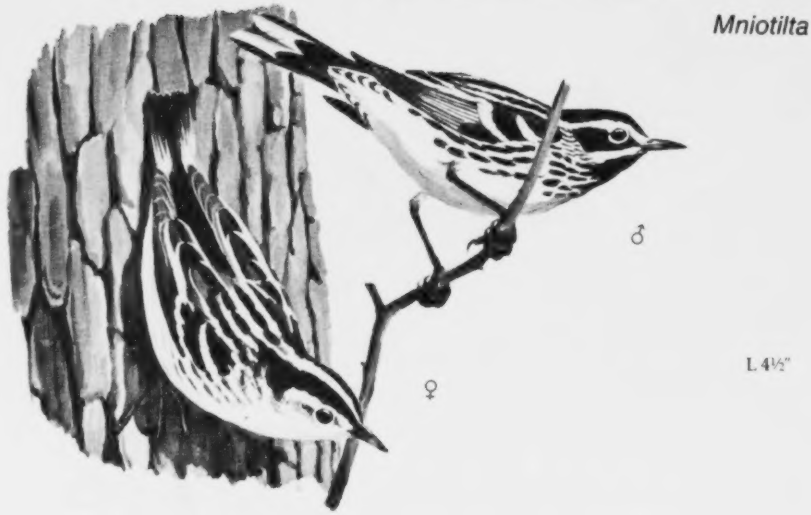
NEST: Usually builds nest 15 to 90 feet above ground in tall trees, well away from the trunk, on horizontal branches that are free from vegetation below. In some parts of the range, favors elm for nesting, but will nest in oaks, maples, basswood, and yellow-poplar.

FOOD: Eats mostly insects gleaned from leaves or caught in the air.

REFERENCES: Armistead in Farrand 1983c, Bent 1953a, DeGraff et al. 1980, Griscom and Sprunt 1979, Johnsgard 1979.

Black-and-white Warbler

Mniotilta varia



RANGE: Breeds from west-central Mackenzie, northern Alberta, and central Saskatchewan to southern Quebec and Newfoundland; south to eastern Montana, central Texas, Louisiana, Alabama, Georgia, and North Carolina. Winters from southern Texas and Florida through Mexico to South America.

STATUS: Common.

HABITAT: Generally associated with semiopen upland stands of deciduous or mixed forests; usually not abundant in coniferous forests. Found in mature and second-growth forests, especially those composed of immature or scrubby trees.

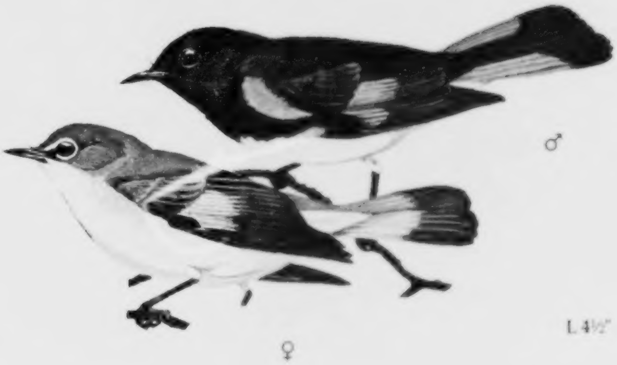
NEST: Builds nest in a slight depression in the ground, usually at the base of a tree or stump, beside a log, or sometimes in the roots of a fallen tree.

FOOD: Mainly eats insects, but it also gleans many spiders and daddy longlegs from tree trunks and larger tree limbs.

REFERENCES: Bent 1953a, Forbush and May 1955, Griscom and Sprunt 1979, Smith 1934.

American Redstart

Setophaga ruticilla



RANGE: Breeds from southeastern Alaska, east to Labrador and Newfoundland south to Utah, southeastern Oklahoma, and east Texas to South Carolina. Absent as a breeding bird through most of the Great Plains region. Winters from Baja California, southern Texas, and central Florida south to Brazil.

STATUS: Abundant.

HABITAT: Prefers open deciduous woodlands with a good understory of shrubs and young trees but is very adaptable. Frequently nests in mixed coniferous-deciduous forests, shade trees and shrubbery around farms, orchards, and willow and alder thickets bordering ponds and streams.

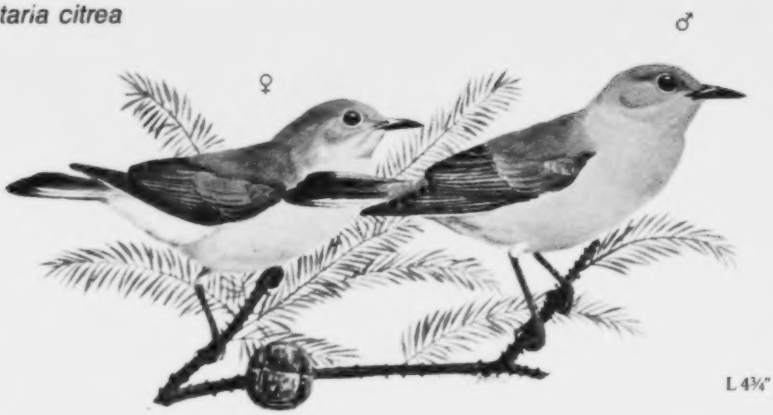
NEST: Normally builds its nest 10 to 20 feet above the ground in a crotch or on a horizontal limb of a second-growth deciduous tree. Frequently parasitized by brown-headed cowbirds when nesting outside of woodlands.

FOOD: Chiefly eats insects caught in the air or gleaned from leaves and branches. Also eats some spiders, daddy longlegs, and fruits.

REFERENCES: Baker 1944, Griscom and Sprunt 1979, Vickery in Farrand 1983c.

Prothonotary Warbler

Protonotaria citrea



RANGE: Breeds from east-central and southeastern Minnesota, south-central Wisconsin, southern Michigan, southern Ontario, central New York and northern New Jersey south to south-central and eastern Texas, the Gulf Coast and central Florida, and west to eastern Oklahoma, eastern Kansas, and central Oklahoma. Winters rarely in Florida and extreme south; otherwise, migrates to eastern Central America and South America.

STATUS: Uncommon.

HABITAT: Generally associated with moist, bottomland, or swampy deciduous woods, including woods that are frequently flooded and willow-lined streamsides.

SPECIAL HABITAT REQUIREMENTS: Moist woodlands with cavities for nesting.

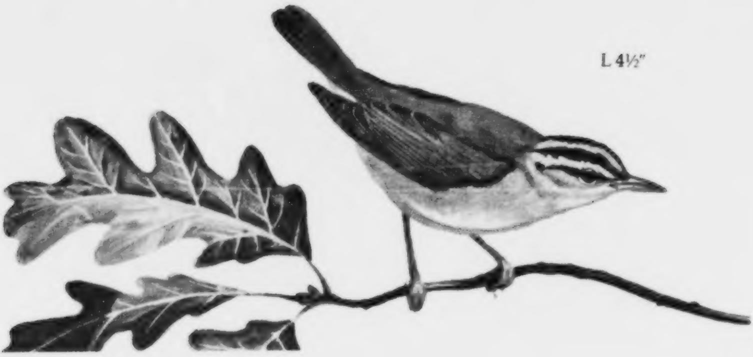
NEST: Nests in natural cavities and old cavities of woodpeckers (especially downy woodpeckers) and chickadees in stumps or snags that are standing in or near water. Will occasionally nest in nest boxes. Usually places nest low, about 5 feet above the ground.

FOOD: Primarily eats insects gleaned from tree trunks and branches, shrubs, and fallen logs.

REFERENCES: Bent 1953a, Forbush and May 1955, Griscom and Sprunt 1979, Pearson 1936, Walkinshaw 1953.

Worm-eating Warbler

Helmitheros vermivorus



RANGE: Breeds from southeastern Nebraska, southeastern Iowa to southern and east-central Ohio and Massachusetts, south to southeastern Oklahoma and northeastern Texas to northern Florida. Winters in the West Indies, Mexico, and Central America.

STATUS: Locally common to rare.

HABITAT: Inhabits wooded hillsides and ravines with medium-sized stands of deciduous trees and undergrowth, often near streams or swampy bogs rimmed by shrubs and vines.

SPECIAL HABITAT REQUIREMENTS: Dense undergrowth.

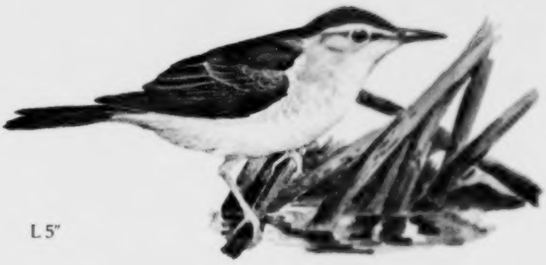
NEST: Builds nest on the ground at the base of a tree or sapling, usually well concealed under dead leaves. Generally locates nest on a hillside or bank of a ravine, but sometimes in a bank cavity or under shrubbery.

FOOD: Gleans its food from the ground; mostly eats insects but some spiders and a few worms.

REFERENCES: DeGraff et al. 1980, Griscom and Sprunt 1979.

Swainson's Warbler

Limnothlypis swainsonii



RANGE: Breeds locally from northeastern Oklahoma, southern Missouri, southern Illinois, southwestern Indiana, southwestern and eastern Kentucky, southern Ohio, western West Virginia, western and southern Virginia, and southern Delaware south to east-central Texas, the Gulf Coast, and northern Florida. Winters on the Caribbean islands and in southeast Mexico.

STATUS: Uncommon.

HABITAT: Generally inhabits rich, damp woodlands with deep shade and dense undergrowth, including wooded swamps and canebrakes of lowlands and, locally, rhododendron thickets of the mountains.

SPECIAL HABITAT REQUIREMENTS: Dense underbrush.

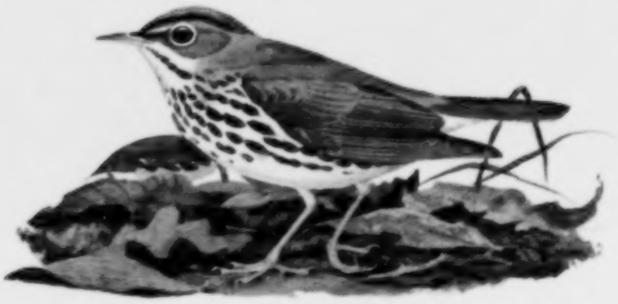
NEST: Builds a large bulky nest, usually 2 to 6 feet above the ground. In coastal lowlands, commonly nests in cane or palmetto; in highlands, nests in shrubs, small trees, vines, briars, rhododendron, or laurel. Sometimes parasitized by cowbirds.

FOOD: Consumes primarily insects and spiders found in leaves on the ground, but occasionally searches for food in low shrubs.

REFERENCES: Harrison 1975, Meanley 1966, 1971.

Ovenbird

Seiurus aurocapillus



L 5"

RANGE: Breeds from northeastern British Columbia, southern Mackenzie, northern Alberta, across southern Canada to Newfoundland south to eastern Colorado, eastern Oklahoma, northern Arkansas, and the mid-Atlantic States to northern Georgia. Winters in coastal South Carolina, Florida, the Gulf States, coastal Texas, the West Indies, Mexico, and Central America.

STATUS: Common.

HABITAT: Usually inhabits open, mature, dry, deciduous forests without thick brush and tangles, preferring areas with an abundance of fallen leaves, logs, and rocks. Occasionally inhabits wet or swampy forests; in the North, inhabits jack pine and spruce forests.

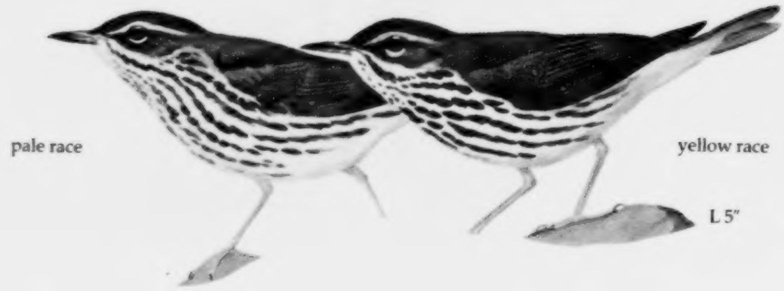
NEST: Locates nest in a slight depression in the ground. Uses almost any available vegetation to construct an arched nest resembling a dutch oven, with the entrance hole at or near ground level.

FOOD: Gleans invertebrate food from the surface of the litter on the forest floor, including insects, small snails, slugs, myriapods, earthworms, and spiders.

REFERENCES: DeGraff et al. 1980, Griscom and Sprunt 1979, Hann 1937, Stenger 1958, Vickery in Farrand 1983c.

Northern Waterthrush

Seiurus noveboracensis



RANGE: Breeds from Alaska and southern Mackenzie across Canada to central Labrador and Newfoundland, south to northwestern Washington and east to central Michigan, northeastern Ohio, southeastern West Virginia, Pennsylvania, New York, and Massachusetts. Winters mostly from Mexico to South America and the West Indies.

STATUS: Locally common.

HABITAT: Generally inhabits thickets along edges of swamps, ponds, and wooded streams with numerous fallen trees. Prefers woodlands and shrubs around standing water rather than moving streams.

SPECIAL HABITAT REQUIREMENTS: Cool, shady, wet, brushy areas with open pools.

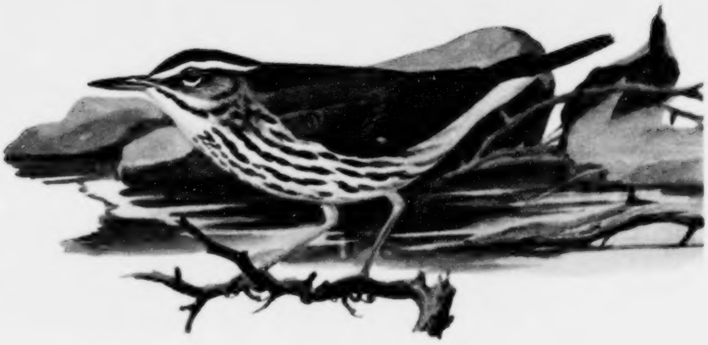
NEST: Builds nests on the ground among fallen trees, at the base of living trees, in cavities of rotten stumps, and under overhanging banks or cuts.

FOOD: Gleans food from moist soil and litter, consuming aquatic and terrestrial insects, small crustaceans, mollusks, and some minnows and worms.

REFERENCES: Griscom and Sprunt 1979, Johnsgard 1979, Petersen in Farrand 1983c.

Louisiana Waterthrush

Seiurus motacilla



L 5¼"

RANGE: Breeds from eastern Nebraska, central Iowa, and east-central Minnesota to central New York and New England, south to eastern Texas, central Louisiana, central Georgia, and the Carolinas. Winters in the West Indies, Mexico, and northern South America.

STATUS: Uncommon.

HABITAT: Favors bottomland forests with moss-covered logs and rank undergrowth along rapidly moving streams. Also sometimes inhabits shrub-grown bogs or areas near swamp pools or lake edges.

SPECIAL HABITAT REQUIREMENTS: Woodlands with flowing water.

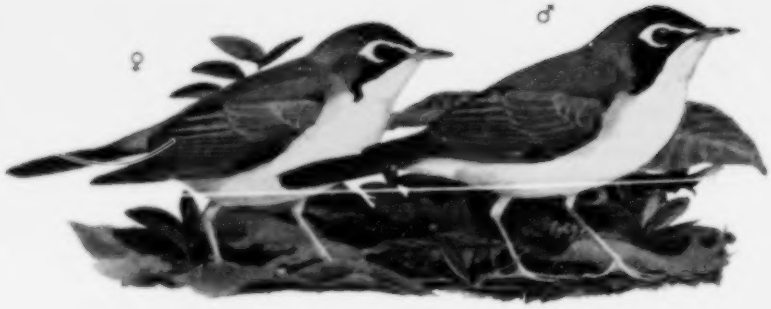
NEST: Typically builds nest on the ground under roots, or in cavities in steep banks along streams. Also nests in cavities of upturned roots of fallen trees over or near water.

FOOD: Searches for food along sandy margins of streams, where it eats aquatic and terrestrial insects, spiders, small mollusks, killifishes, and snails.

REFERENCES: Eaton 1958, Griscom and Sprunt 1979, Petersen in Farrand 1983c.

Kentucky Warbler

Oporornis formosus



L 4½"

RANGE: Breeds from southeastern Nebraska, southwestern Wisconsin, southern Michigan, central Ohio, southern Pennsylvania, and southeastern New York south to eastern Texas, the Gulf Coast, central Georgia, and South Carolina. Casual in southwestern States. Winters from Mexico south to northern South America.

STATUS: Common.

HABITAT: Inhabits shrubby woodland borders and the understory of damp or shady deciduous woods, favoring moist ravines and bottomlands. Often found near water and at low elevations.

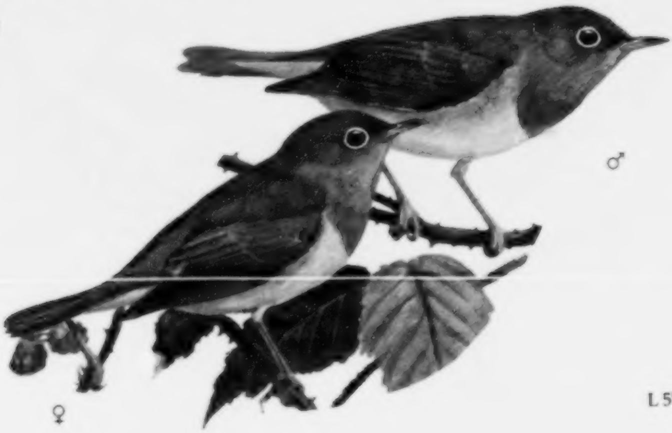
NEST: Generally builds nest on the ground among plants at the base of shrubs and trees, or under branches of fallen limbs. Occasionally places nest near the ground in shrubs. Commonly victimized by brown-headed cowbirds.

FOOD: Gleans most food from leaves on the ground, but occasionally catches insects from low leaves and branches. Mostly eats spiders and insects.

REFERENCES: DeGaris 1936, Griscom and Sprunt 1979, Sykes in Farrand 1983c.

Connecticut Warbler

Oporornis agilis



RANGE: Breeds from east-central British Columbia east across Canada to west-central Quebec, and south to southern Manitoba, northern Minnesota, northern Wisconsin, central Michigan, and south-central Ontario. Winters in South America.

STATUS: Uncommon and local.

HABITAT: Generally inhabits cold, damp black spruce and tamarack bogs, and prefers areas with scattered trees and grassy openings. At the extremes of the breeding range, inhabits well-drained ridges or poplar and aspen woods.

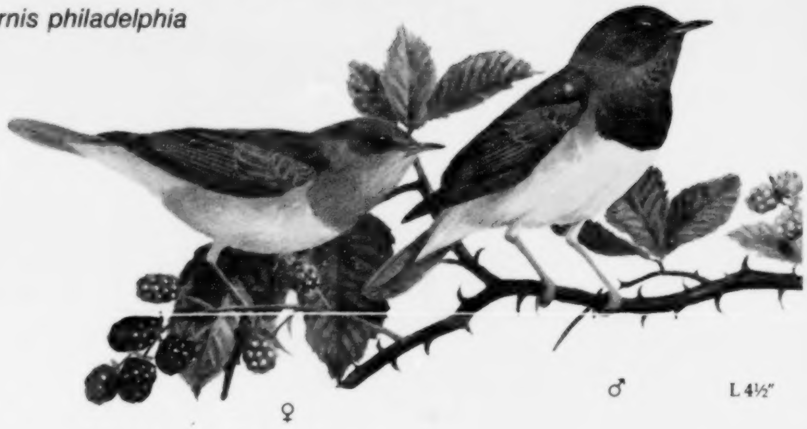
NEST: Conceals nest in a mound of moss or beside a clump of dry grass on or near the ground. Usually nests in open forests with widely spaced trees such as aspen and balsam.

FOOD: Mostly eats spiders gleaned from the ground or low branches, but also eats insects, their larvae and eggs.

REFERENCES: Griscom and Sprunt 1979, Walkinshaw and Dyer 1961, Harrison 1975.

Mourning Warbler

Oporornis philadelphia



RANGE: Breeds east of the Rocky Mountains across Canada and the northern United States from northeastern British Columbia to Newfoundland south to North Dakota and central New England through the Appalachian Mountains to Virginia. Winters in Central America and northwestern South America.

STATUS: Locally common to uncommon.

HABITAT: Inhabits shrubby second-growth, dense undergrowth in open woods, shrubby margins of lowland swamps or bogs, and forest clearings or burned areas that have brambles, shrubs, and saplings. May occur in partially open coniferous and deciduous woodlands with herb and shrub understories.

SPECIAL HABITAT REQUIREMENTS: Extensive stands of saplings or dense shrubs.

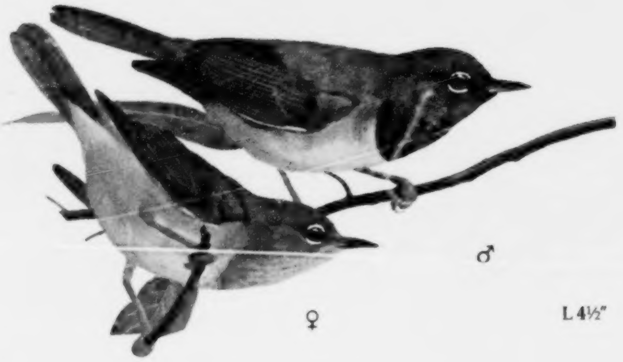
NEST: Conceals nests in dense herbaceous or shrubby vegetation on or near the ground. Tends to nest in edges along woodland or clearing edges, logging trails, or at the edges of bogs and marshes.

FOOD: Generally gleans beetles, lepidopterans, and spiders from the ground or low shrubs. (Detailed food habits have not been studied.)

REFERENCES: Cox 1960, DeGraff et al. 1980, DeSante in Farrand 1983c, Griscom and Sprunt 1979.

MacGillivray's Warbler

Oporornis tolmiei



RANGE: Breeds from southeastern Alaska, southwestern Yukon, northern British Columbia, southern Alberta, northwestern Saskatchewan, and southwestern South Dakota south, primarily in the mountains, to southern California, central Arizona, and southern New Mexico. Winters from northern Mexico to Panama.

STATUS: Common to uncommon.

HABITAT: Prefers early successional stages of cutover or burned woodlands or low shrubby habitats. Also inhabits low vegetation such as blackberry, salmonberry, cherry, currant, serviceberry, snowberry, poison oak, ninebark, spirea, and riparian willow and alder.

SPECIAL HABITAT REQUIREMENTS: Low vegetation.

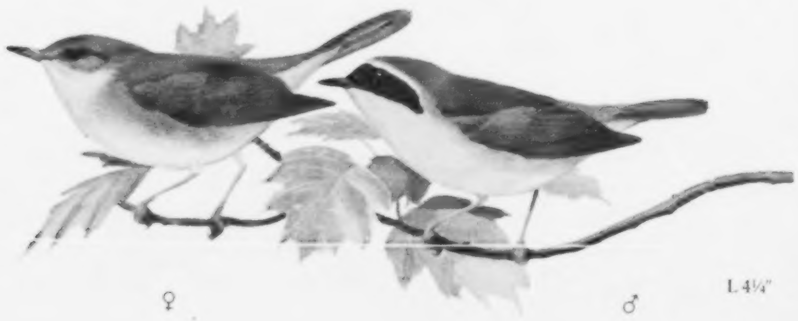
NEST: Prefers dense, moist, brushy habitat, or areas with tall weeds or ferns for nesting. Builds nest 2 to 5 feet above the ground, attached to several stalks of plants.

FOOD: Forages close to the ground in dense thickets, where it gleans insects from the vegetation. (No comprehensive food studies have been made.)

REFERENCES: DeSante in Farrand 1983c, Griscom and Sprunt 1979, Terres 1980.

Common Yellowthroat

Geothlypis trichas



RANGE: Breeds from southeastern Alaska to northern Alberta and Newfoundland south to northern Baja California, Mexico, and southern Texas, the Gulf Coast and southern Florida. Winters along the Pacific Coast, from northern California across southern Arizona, central Texas, and southern Arkansas to the Gulf States, and along the Atlantic Coast from New Jersey, Virginia, and Delaware to Florida; also in the Bahamas, West Indies, Mexico, and Central America.

STATUS: Common to abundant.

HABITAT: Typically inhabits areas with a mixture of dense, lush herbaceous vegetation with small woody plants (mainly shrubs and small trees), in damp or wet situations. Occasionally found in dry thickets or dense undergrowth in open woodlands.

SPECIAL HABITAT REQUIREMENTS: Dense growth of low vegetation.

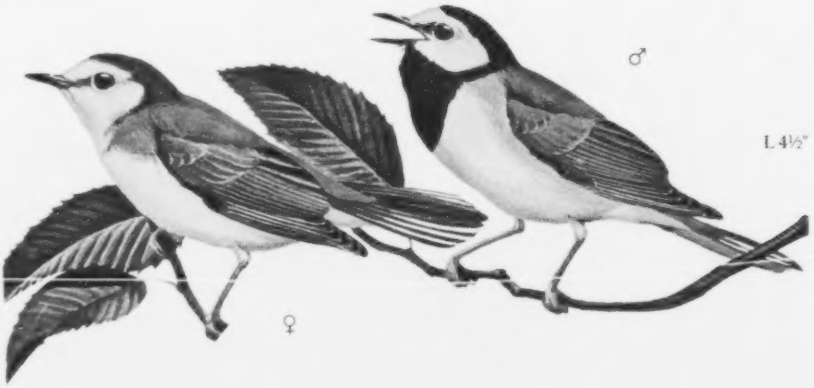
NEST: Builds a bulky cup nest of grass, leaves, and bark, well hidden on the ground in a grass tussock or similar vegetation. Occasionally locates nest in shrubs or a tangle of briars up to 3 feet above the ground.

FOOD: Gleans insects and spiders from leaves of shrubs, grasses, and forbs.

REFERENCES: Griscom and Sprunt 1979, Hofslund 1959, Low and Mansell 1983, Stewart 1953, Terres 1980.

Hooded Warbler

Wilsonia citrina



RANGE: Breeds from southeastern Iowa, northern Illinois, and extreme southern Michigan and Ontario, southern New York, and New England south to eastern Texas, the Gulf of Mexico, and northern Florida. Winters from Mexico to Panama.

STATUS: Common.

HABITAT: Generally inhabits moist, forested regions of mixed hardwoods of beech, maple, hickory, and oak with dense undergrowth. In the Southeast, also inhabits cypress-gum swamplands.

SPECIAL HABITAT REQUIREMENTS: Low, dense, deciduous woody vegetation.

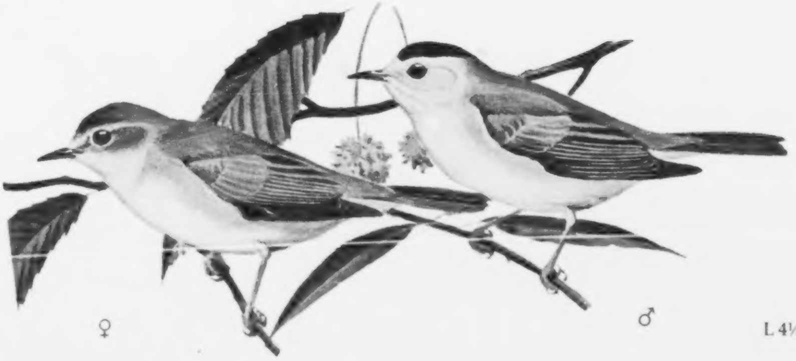
NEST: Builds a cuplike nest, usually in a fork of saplings, shrubs, or in herbaceous vegetation, less than 5 feet above the ground.

FOOD: Primarily eats insects, and some spiders. Is an expert "flycatcher."

REFERENCES: Armistead in Farrand 1983c, Bent 1953b, Griscom and Sprunt 1979, Odum 1931.

Wilson's Warbler

Wilsonia pusilla



RANGE: Breeds from northern Alaska, northern Yukon, northern Ontario, southeastern Labrador, and Newfoundland south to southern California, central Nevada, northern Utah, northern New Mexico, central Ontario, northern New England, and Nova Scotia. Winters from southern California and southern Texas to Panama.

STATUS: Common.

HABITAT: Prefers wet clearings in early stages of regeneration. Also inhabits peat or laurel bogs with scattered young or dwarf spruces and tamaracks, and riparian willow and alder thickets.

SPECIAL HABITAT REQUIREMENTS: Shrubby vegetation.

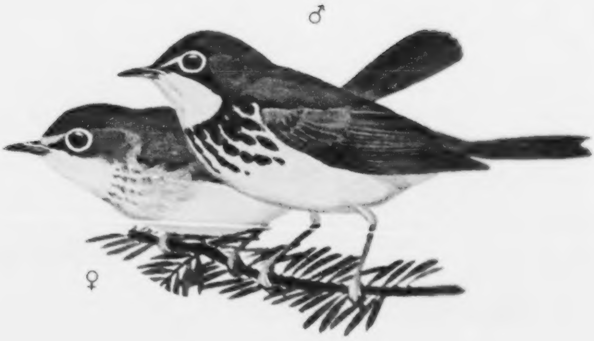
NEST: Generally nests on the ground, sometimes in loose colonies. Usually builds nest at the base of a small tree or shrub, often well concealed in a grass hummock. Occasionally, places nest above the ground in low, dense tangles of vegetation.

FOOD: Mostly eats insects (about 93 percent of diet) gleaned from the ground and twigs or caught by flycatching. Also eats some spiders and fruit pulp.

REFERENCES: Beal 1907, Bent 1953b, Griscom and Sprunt 1979, Petersen in Farrand 1983c, Stewart 1973.

Canada Warbler

Wilsonia canadensis



L 4¾"

RANGE: Breeds from central Alberta east to southern Quebec and Nova Scotia south to southern Manitoba, central Minnesota, central Michigan, and through the Appalachian Mountains to northern Georgia. Winters in South America.

STATUS: Locally common.

HABITAT: Inhabits a variety of vegetative types from lowlands to uplands and coniferous to deciduous. Favors shrubby undergrowth in cool, moist, mature woodlands, streamside thickets, and weedy ravines. In the southern highlands, lives in rhododendron thickets.

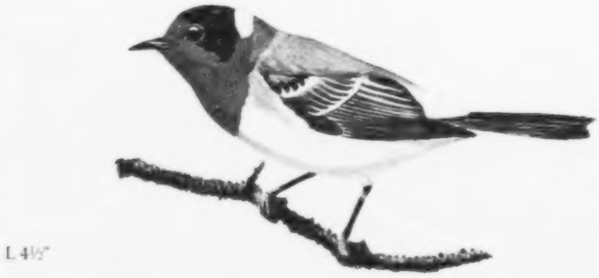
NEST: Builds nest on or near the ground on mossy logs or stumps, in cavities in banks, among roots of fallen trees, or in mossy hummocks.

FOOD: Mostly eats insects and spiders caught by flycatching or gleaned from the ground.

REFERENCES: Bent 1953b, Griscom and Sprunt 1979, Krause 1965, Petersen in Farrand 1983.

Red-faced Warbler

Cardellina rubrifrons



RANGE: Breeds from central Arizona and southwestern New Mexico south into Mexico to western Durango. Winters in the highlands of Mexico to El Salvador and western Honduras.

STATUS: Locally common.

HABITAT: Prefers Douglas-fir and Engelmann spruce forests at elevations of 6,500 to 9,000 feet, but also inhabits ponderosa pine, oak, aspen, and riparian stands and seems to favor southern exposures.

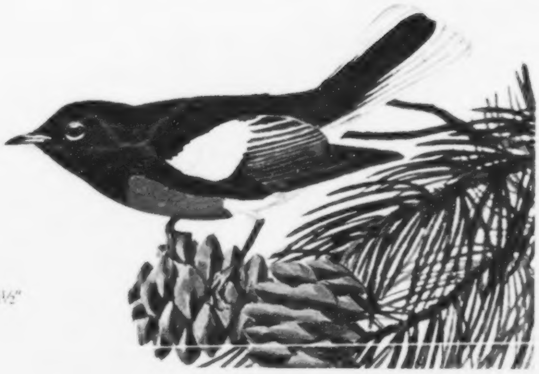
NEST: Places nest nearly always on the ground, concealed beneath or beside a sheltering log, rock, sapling, or tuft of grass, usually on a well-drained bank or hillside.

FOOD: Searches for food through the outer branches of conifer trees and flycatches. Primarily eats insects. (Food habits have not been studied.)

REFERENCES: Griscom and Sprunt 1979, Scott and Gottfried 1983.

Painted Redstart

Myioborus pictus



L 4½"

RANGE: Breeds from northwestern and central Arizona, southwestern New Mexico, and western Texas south through the mountains of Central America to Nicaragua; casually in southern California. Winters from northwestern Mexico south through the breeding range.

STATUS: Common.

HABITAT: Mainly inhabits timbered desert mountain canyons, gulches, and rugged slopes in coniferous and deciduous woodlands, generally near water. Especially favors dense thickets and oaks in secluded canyons near streams.

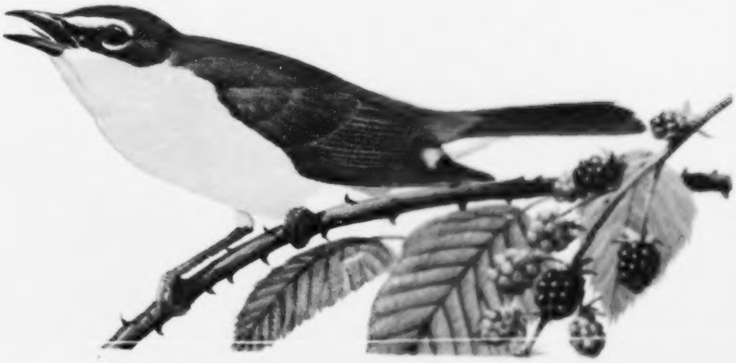
NEST: Nearly always places nest on the ground under a rock, tree root, or grass tuft that provides overhead shelter, and usually on a sloping bank or rocky canyon wall near water.

FOOD: Gleans its food from leaves, tree trunks, and branches. Also hovers while picking insects from tree foliage, and hawks over water. Mostly eats insects. (Food habits have not been reported, however.)

REFERENCES: Bent 1953b, Griscom and Sprunt 1979, Marshall and Balda 1974, Oberholser 1974b.

Yellow-breasted Chat

Icteria virens



L 6¼"

RANGE: Breeds from southern British Columbia, North Dakota, southern Minnesota, southern Ontario, Vermont, and New Hampshire south to south-central Baja California, the Gulf Coast, north-central Florida, and Mexico. Winters from southern Texas and southern Florida south through Central America and western Panama.

STATUS: Common.

HABITAT: Favors ravine or streamside thickets of vines, briars, small trees, and tall shrubs. Also inhabits forest edges, hedgerows, overgrown pastures, scrub country, and early successional stages of forest regeneration.

SPECIAL HABITAT REQUIREMENTS: Dense shrubs and vines with scattered young trees.

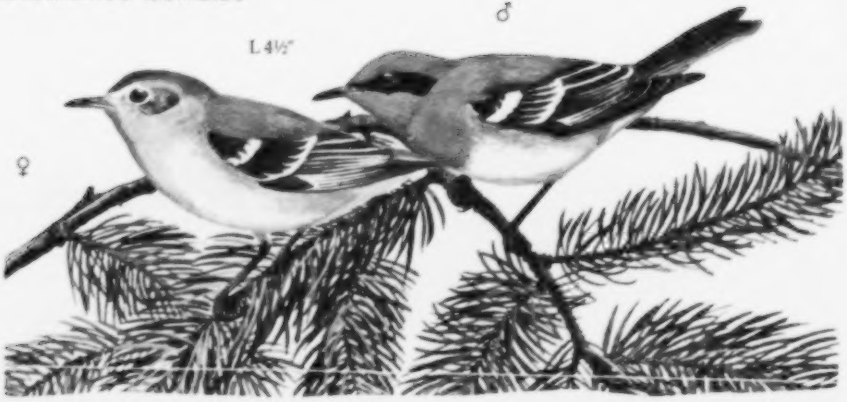
NEST: Usually builds nest 2 to 8 feet above the ground in dense small bushes, vines, or briars. May sometimes nest in groups or colonies, but maintains separate territories.

FOOD: Primarily eats insects gleaned from foliage and shrub stems; also eats some berries and fruits.

REFERENCES: Bent 1953b, Dennis 1958, Griscom and Sprunt 1979, Petrides 1938, Thompson and Nolan 1973.

Olive Warbler

Peucedramus taeniatus



RANGE: Breeds from central and southeastern Arizona and southwestern New Mexico through the highlands of Mexico to north-central Nicaragua. Winters throughout the breeding range, except in Arizona and New Mexico, where it moves southward.

STATUS: Fairly common.

HABITAT: Generally found near the summits of mountains in the Southwest above 8,000 feet in mixed pine-fir forests; usually observed near the tops of coniferous trees.

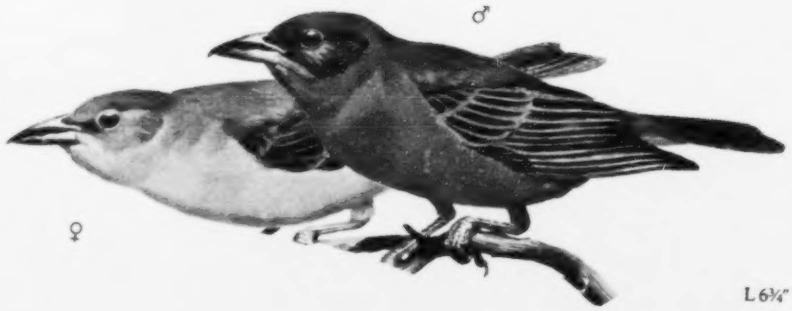
NEST: Builds a cup-shaped nest, usually placed on the limb of a conifer tree limb near the end, sometimes hidden by pine needles or a cluster of mistletoe; usually high (30 to 80 feet) above the ground.

FOOD: Spends considerable time creeping over the branches and twigs of pines searching for insects. (No studies on food habits have been reported.)

REFERENCES: Bent 1953a, Griscom and Sprunt 1979.

Hepatic Tanager

Piranga flava



RANGE: Breeds from southeastern California and northwestern Arizona through New Mexico and the Trans-Pecos region of Texas, south through the highlands of Mexico and Central America to central Argentina. Winters from northern Mexico through the breeding range; casually in southern California and southern Arizona in winter.

STATUS: Fairly common.

HABITAT: Generally favors dense pine and pine-oak woodlands between 5,000 and 7,500 feet in elevation, but also inhabits the more monotypic pine, oak, and pinyon-juniper woodlands near streams.

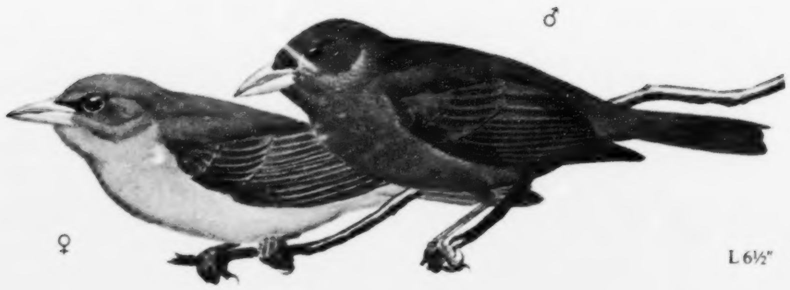
NEST: Builds a flat, saucer-shaped nest, usually in a fork near the end of a horizontal tree branch, 15 to 50 feet above the ground.

FOOD: Gleans insects from branches and leaves of oaks and pines. It occasionally hawks for flying insects, and during the summer eats some fruits. (No studies of food habits have been reported.)

REFERENCES: Bent 1958, Phillips et al. 1964, Terrill in Farrand 1983c.

Summer Tanager

Piranga rubra



RANGE: Breeds from southeastern California and southern Nevada to central Oklahoma, and from southeastern Nebraska to New Jersey south to the Gulf Coast and northern Mexico. Winters mainly from Mexico to Bolivia; rare winter visitor in southern temperate areas.

STATUS: Common.

HABITAT: Generally inhabits dry, open woodlands of oaks, pines, and hickories in the Southeast; but only rich bottomland forests at the northern edge of its range. Inhabits low-elevation willows and cottonwoods, and streamside vegetation in canyons in the Southwest.

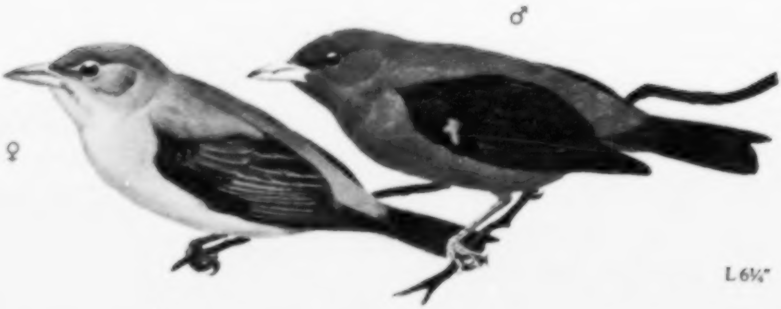
NEST: Builds a flimsy, flat, shallow cup nest on a horizontal limb (often oak) 10 to 35 feet above the ground.

FOOD: Eats many bees and wasps, and the larvae from wasp nests. Catches insects in the air and also eats some small fruits. (Food habits have not been thoroughly studied.)

REFERENCES: Bent 1958, Fitch and Fitch 1955, Forbush and May 1955, Johnsgard 1979, Potter 1973, Terres 1980.

Scarlet Tanager

Piranga olivacea



RANGE: Breeds from southern Manitoba, western Ontario, southern Quebec, and New Brunswick south to eastern North Dakota, central Nebraska, southern Kansas, eastern Oklahoma, central Arkansas, northern Alabama, and northern Georgia; casually in the West. Winters in South America.

STATUS: Common.

HABITAT: Generally inhabits mature deciduous and mixed deciduous-coniferous woodlands, roadside shade trees, wooded parks, and large shade trees of suburbs. In the Great Plains, primarily inhabits mature hardwood forests of river valleys, hillsides, and valleys.

SPECIAL HABITAT REQUIREMENTS: Mature deciduous or mixed woodlands.

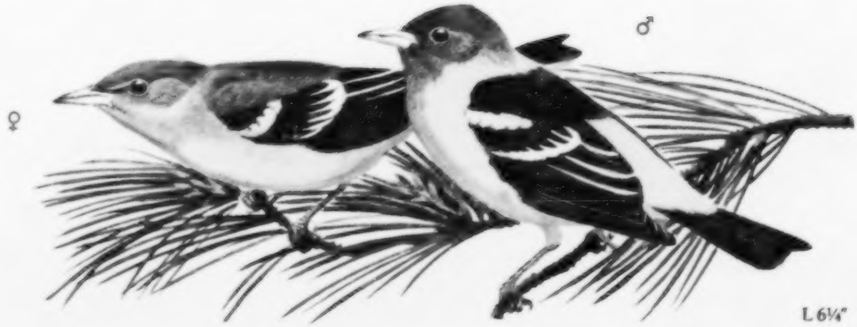
NEST: Builds a shallow, saucer-shaped nest, usually well out on a horizontal limb of a large tree, usually in a leaf cluster or in a position where it is shaded from above.

FOOD: Gleans food from tree tops, shrubs, or the ground. Eats a great variety of insects, slugs, snails, worms, spiders, and millipedes; also some wild fruits.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Terres 1980, Vickery in Farrand 1983c.

Western Tanager

Piranga ludoviciana



RANGE: Breeds from southeastern Alaska, northern British Columbia, southern Mackenzie, northern Alberta, and central Saskatchewan south to northern Baja California, southern Nevada, southwestern Utah, central and southeastern Arizona, southern New Mexico, and western Texas, and east to eastern Montana, western South Dakota, northwestern Nebraska, central Colorado, and central New Mexico. Winters from Baja California and central Mexico south to Central America.

STATUS: Common.

HABITAT: Generally inhabits relatively open, mature coniferous forests up to 10,000 feet in elevation. Breeds less frequently in mixed forests and in deciduous forests in the mountains, along rivers, or in gulches and canyons at lower elevations.

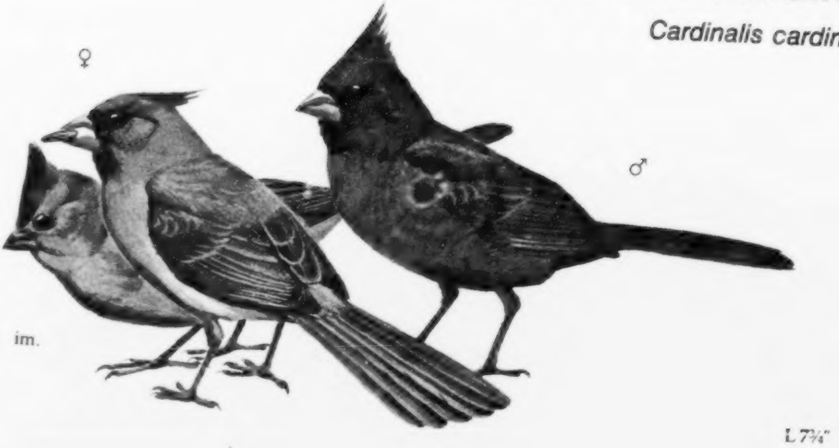
NEST: Builds a shallow, compact, saucer-shaped nest, saddled in a fork of a horizontal branch well out from the trunk. Usually locates nest in a coniferous tree.

FOOD: Consumes insects gleaned from foliage or branches or caught while hawking (about 82 percent of the diet) and fruits (about 18 percent).

REFERENCES: Beal 1907 in Bent 1958, Johnsgard 1979, Harrison 1979.

Northern Cardinal

Cardinalis cardinalis



RANGE: Resident from southeastern South Dakota, central Minnesota, northern Wisconsin, and southern Ontario to Massachusetts and Nova Scotia, south to the Gulf Coast and southern Florida. Local in southwestern Texas and New Mexico, southern Arizona, and southeastern California south throughout the Mexican lowlands.

STATUS: Common in most of the eastern range; local in the Southwest.

HABITAT: Inhabits forest edges or brushy forest openings, parks, and residential areas with shrubs and low trees, second-growth woods, and open swamps. In the Southwest, inhabits brushy habitats of washes, riparian and residential areas, and the denser desert thorn-scrub.

SPECIAL HABITAT REQUIREMENTS: Dense forest understory or dense shrub habitat.

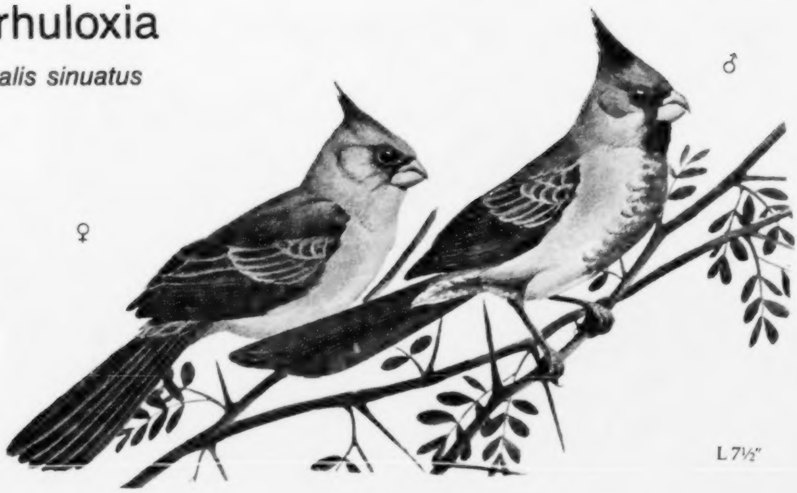
NEST: Builds a loose nest in dense shrubbery, small deciduous or coniferous trees, thickets, vines, briar tangles, or mesquite trees, generally less than 10 feet, but may be up to 20 feet, above the ground.

FOOD: Primarily eats vegetable matter gleaned from the ground, including grains, miscellaneous weed seeds, and wild fruits. Also eats smaller amounts of insects.

REFERENCES: Forbush and May 1955, Harrison 1979, Johnsgard 1979, McAtee 1908, Terrill in Farrand 1980.

Pyrrhuloxia

Cardinalis sinuatus



RANGE: Resident from Baja California, south-central and southeastern Arizona, southern New Mexico, and southern and western Texas south to central Mexico.

STATUS: Fairly common.

HABITAT: Generally lives yearlong in thorny thickets, especially at the edges of mesquite along desert arroyos, in thorny shrubs at lower, wide mouths of mountain canyons, and in thickets along streams. In winter, often wanders from thickets to feed in flocks along roads, fencerows, and borders of fields.

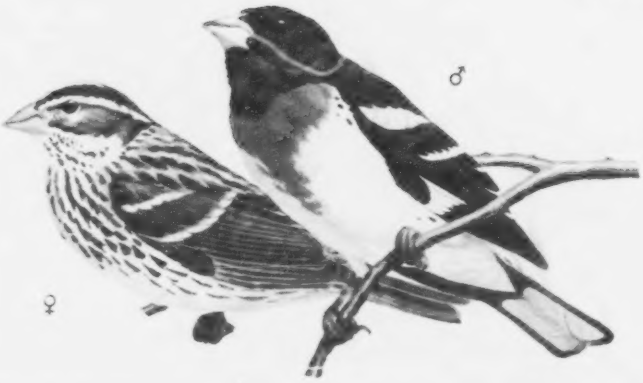
NEST: Builds a compact nest, usually low (3 to 8 feet above the ground), in a thorny shrub or tree, or in a clump of mistletoe.

FOOD: Gleans most of its food from the ground. During the winter, eats cactus fruits, seeds of grasses, weeds, and mesquite, and catkins of cottonwood. In summer, also eats insects.

REFERENCES: Harrison 1979, Oberholser 1974b, Terres 1980.

Rose-breasted Grosbeak

Pheucticus ludovicianus



L 7¼"

RANGE: Breeds from southern Mackenzie, across southern Canada to Nova Scotia south to north-central North Dakota and Kansas, central Oklahoma, southern Missouri, central Indiana and Ohio to central New Jersey and south along the Appalachians to northern Georgia. Winters from central Mexico to South America; rare in the Southwest.

STATUS: Common.

HABITAT: Seems to require a combination of large trees, open areas, and thick shrubs or brush. In summer, inhabits second-growth deciduous or mixed woods, borders of swamps and streams, dense growths of small trees and shrubs along edges of woods and pastures, gardens, and parks of towns and villages.

SPECIAL HABITAT REQUIREMENTS: Forest edges with dense brush or thick sapling stands.

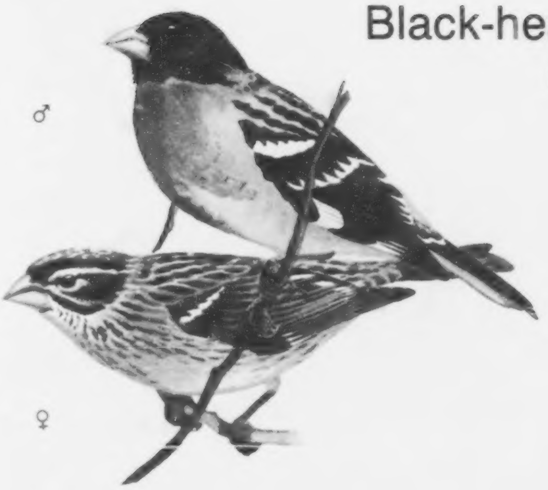
NEST: Builds a flimsy nest, usually in a fork of a deciduous tree or shrub, about 10 to 15 feet above the ground. Occasionally builds nest in conifer trees.

FOOD: Consumes about equal amounts of vegetable and animal matter gleaned from leaves, twigs, or from the ground. Vegetable matter includes weed seeds, fruit, and tree seeds and buds; animal portion is nearly all insects.

REFERENCES: Forbush and May 1955, Harrison 1975, McAtee 1908, Terres 1980, Vickery in Farrand 1983c.

Black-headed Grosbeak

Pheucticus melanocephalus



L 7¼"

RANGE: Breeds from southern British Columbia east to southern Saskatchewan and central Kansas south to southern Mexico. Winters mainly in western Mexico from southern Baja California and southern Sonora south to Oaxaca. Rare in the Southwest during winter.

STATUS: Common.

HABITAT: Primarily inhabits relatively open stands of deciduous forests in uplands or floodplains, but also found in or near orchards, brushy woodlands or chaparral, edges or transitions between grasslands and woodlands, riparian groves or thickets, and parks or suburbs with many trees.

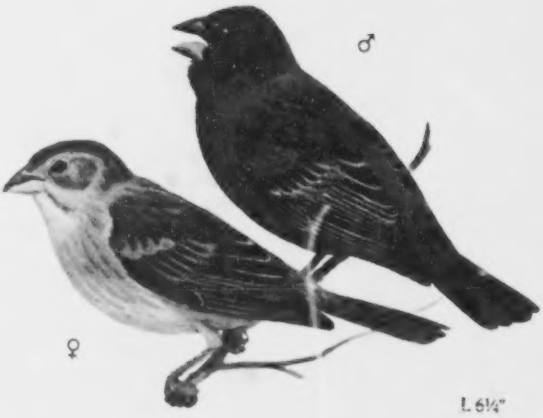
NEST: Builds a bulky, open-cup nest 4 to 12 feet above the ground in a fork of a variety of shrubs or small trees. Mostly nests (about 80 percent) in deciduous trees and shrubs.

FOOD: Gleans food from leaves, stems, or the ground. Mostly (about 57 percent) eats animal material (mainly spiders and insects); also eats vegetable foods (seeds and fruits.)

REFERENCES: Bent 1968a, Bevier in Farrand 1983c, Johnsgard 1979, Terres 1980, Weston 1947.

Blue Grosbeak

Guiraca caerulea



RANGE: Breeds from southern California, southern Nevada, southern Colorado, and Nebraska (also north to south-central North Dakota) and southern Ohio and New Jersey south to the Gulf Coast, and central Florida, through Mexico into Costa Rica. Winters from Mexico south to Panama, and in the Bahamas and Cuba.

STATUS: Fairly common, but rare and local in the northeastern part of its range.

HABITAT: Inhabits weedy pastures, old fields with saplings, forest edges, streamside thickets, hedgerows, swampy thickets, and willows along irrigation ditches. In the West, inhabits mesquite woods.

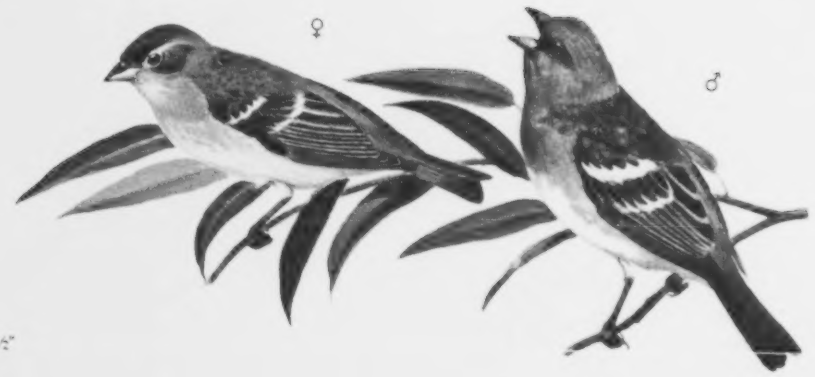
NEST: Builds a compact, rather deep nest 3 to 8 feet above the ground in a low tree, shrub, tangle of vines, or briars, and typically at the edge of an open area.

FOOD: Gleans much of its food from the ground, but also searches for food among leaves and branches of trees and shrubs. Consumes insects, snails, spiders, grain, weed seeds, and fruits.

REFERENCES: Forbush and May 1955, Johnsgard 1979, Stabler 1959, Terres 1980.

Lazuli Bunting

Passerina amoena



L 4½"

RANGE: Breeds from southern British Columbia to central North Dakota and northeastern South Dakota south to northwestern Baja California, southern Nevada, central Arizona, central New Mexico, and central Texas. Winters from southern Baja California and southern Arizona south to Guerrero and central Veracruz.

STATUS: Common to uncommon.

HABITAT: Inhabits a variety of habitats from near sea level to 10,000 feet in the Sierras and 8,000 feet in the Rocky Mountains of Colorado. Generally found in diverse habitats with an abundance of shrubs, low trees, and herbaceous vegetation such as thicketed swales and draws of prairies and dry bushy hillsides, wooded valleys, aspen groves, and shrubby banks of mountain streams. In much of the arid West, found in riparian vegetation.

SPECIAL HABITAT REQUIREMENTS: Shrubby vegetation.

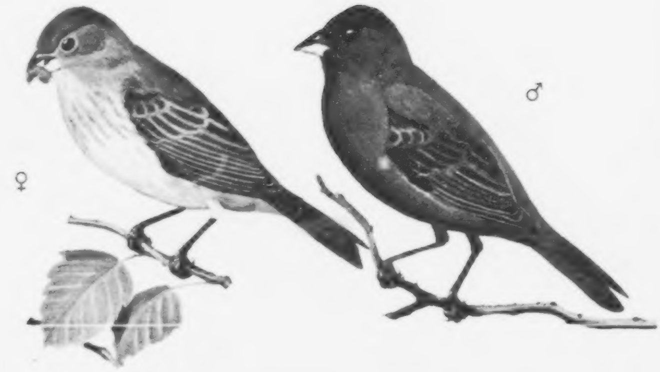
NEST: Builds a coarsely woven cup nest attached to supporting stalks or a fork of a low shrub or vine tangle, usually 2 to 4 feet above the ground.

FOOD: Forages on or near the ground in shrubs and occasionally hawks for insects. Consumes animal material (primarily insects which account for over half of the spring and summer diet) and grass and weed seeds.

REFERENCES: Bent 1968a, Grinnell and Miller 1944, Harrison 1979, Johnsgard 1979, Terres 1980.

Indigo Bunting

Passerina cyanea



L 4½"

RANGE: Breeds from southeastern Saskatchewan and northern Minnesota to southern New Brunswick, south to southern New Mexico, central and southeastern Texas, the Gulf Coast, and central Florida; locally in central Colorado, southwest Utah, central Arizona, and southern California. Winters primarily in southern Mexico, Cuba, and the West Indies south to Panama; also in southern Florida and infrequently in coastal Texas.

STATUS: Common in eastern range.

HABITAT: Generally associated with edges of woods, old burns, open brushy fields, roadside thickets, and brushy ravines. Tends to be more numerous along streams, and avoids deep woods.

SPECIAL HABITAT REQUIREMENTS: Forest edges.

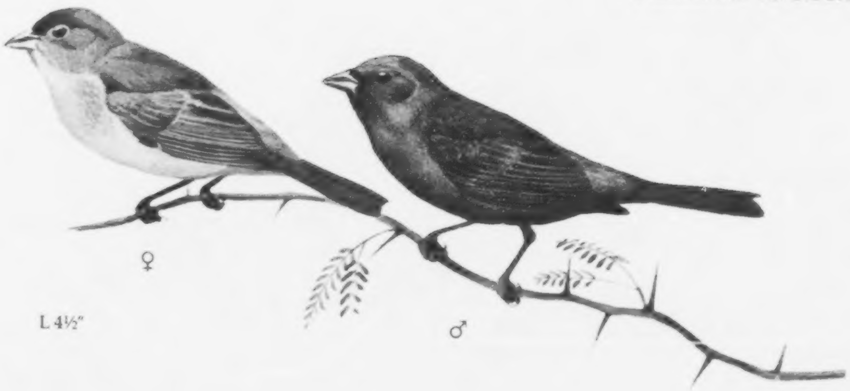
NEST: Builds a cup nest 1 to 12 feet above the ground in a crotch of a bush, shrub, or low tree, in a tangle of berry vines, or in canebrakes. Frequently parasitized by brown-headed cowbird.

FOOD: Forages on or near the ground in shrubs, and eats a variety of foods, including insects, weed seeds, berries, and fruits.

REFERENCES: Bent 1968a, DeGraff et al. 1980, Forbush and May 1955, Harrison 1975.

Varied Bunting

Passerina versicolor



RANGE: Breeds in south-central and southeastern Arizona, southwestern and southeastern New Mexico and southern Texas south to Mexico and Guatemala. Winters from southern Texas south throughout the breeding range.

STATUS: Local and uncommon.

HABITAT: Inhabits mesquite or thorny shrubs, brushy pastures, dense vegetation with few cottonwoods, foothill canyons, and generally hilly and rocky terrain; tends to avoid heavily wooded areas.

SPECIAL HABITAT REQUIREMENTS: Thorny shrubs.

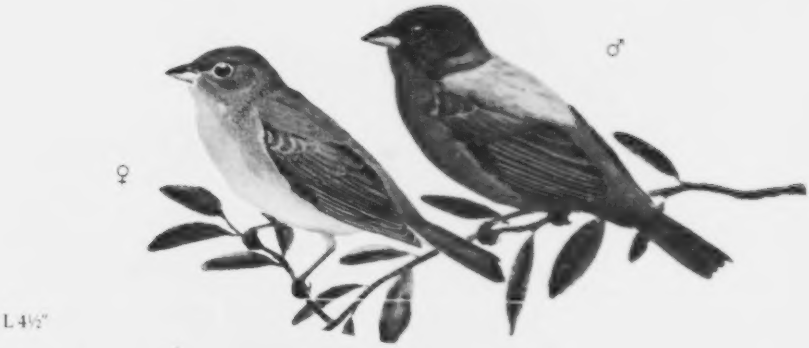
NEST: Builds a compact cup nest 2 to 10 feet above the ground in the crotch of a shrub, low tree, or vine tangle.

FOOD: Presumably eats insects and seeds similar to the diet of the indigo and lazuli buntings. (No definitive studies have been made.)

REFERENCES: Bent 1968a, Harrison 1979, Oberholser 1974b, Terres 1980.

Painted Bunting

Passerina ciris



RANGE: Breeds from southeastern New Mexico and southern Missouri south to southern Alabama and into Mexico, also along Atlantic Coast from southeast North Carolina south to central Florida. Winters from southeastern Texas, central Florida, the Bahamas, and Cuba south through Mexico to Panama.

STATUS: Locally common.

HABITAT: Inhabits open country with brushy and weedy fields, hedges, edges of woods, roadside shrubs, gullies, thickets along streambanks, shelterbelts, and gardens.

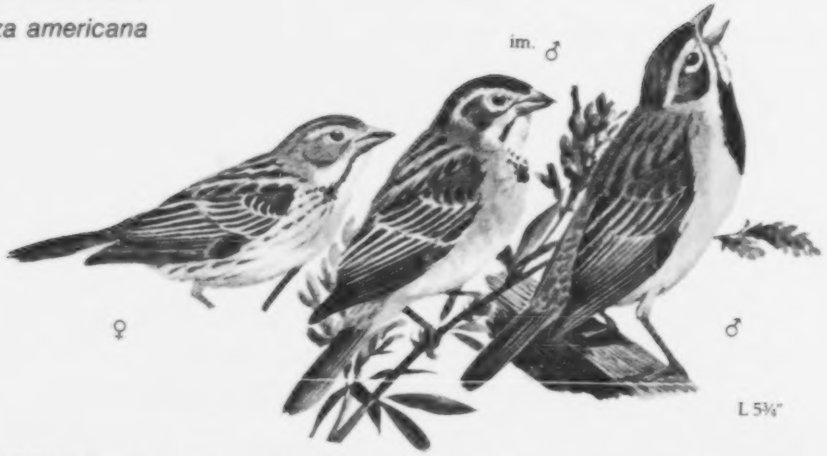
NEST: Nests in a variety of deciduous shrubs, small trees, and vines. Attaches shallow cup nest to twigs or other supporting vegetation, 3 to 9 feet above the ground, in bushes, low trees, or vine tangles. Raises two and sometimes three broods each year; susceptible to parasitism by brown-headed cowbirds.

FOOD: Mostly eats vegetable matter, which is gleaned from the ground or seed heads of grass, but also some animal matter (insects and a few spiders.)

REFERENCES: Bent 1968a, Harrison 1979, Johnsgard 1979, Sykes in Farrand 1983c, Terres 1980.

Dickcissel

Spiza americana



RANGE: Breeds from eastern Montana and southern Canada to Massachusetts, south to central Colorado, southern Texas, and central South Carolina. In the eastern portion of the range, breeds sporadically and irregularly. Winters mostly from Mexico to northern South America. Winters locally (in small numbers) in coastal lowlands from southern New England south to Florida and west to southern Texas.

STATUS: Common in the Plains, but rare and local in the East; overall population appears to be declining.

HABITAT: Generally inhabits grasslands having tall grasses, forbs, or shrubs but also fields planted to such crops as alfalfa, clover, and timothy. Also frequents abandoned or fallow croplands.

SPECIAL HABITAT REQUIREMENTS: Dense herbaceous cover and song perches.

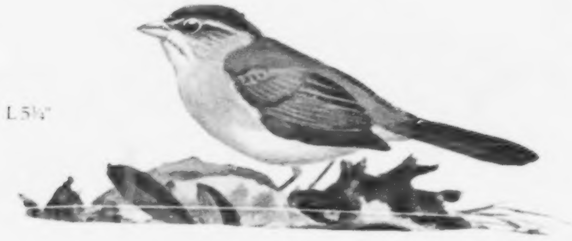
NEST: Builds a bulky, cup nest on the ground or attached to forks in shrubs, vines, or low trees. Locates nests in a variety of situations such as marshes, hayfields, abandoned or fallow croplands, roadsides, fencerows, and grasslands.

FOOD: Gleans most of its food from the ground; eats mainly vegetable materials — weed seeds and grain, and some insects.

REFERENCES: Harmeson 1974, Gross 1921, Overmire 1962, Taber 1947, Tate and Tate 1982, Zimmerman 1982.

Olive Sparrow

Arremonops rufivirgatus



RANGE: Resident in south Texas and south locally to Costa Rica.

STATUS: Fairly common locally.

HABITAT: Generally inhabits thorny shrub habitats such as mesquite, ebony blackbead, anacua, huisache, and retaima in the Rio Grande delta. Farther north, found in streamside cane, briars, willows, ash, and live oaks.

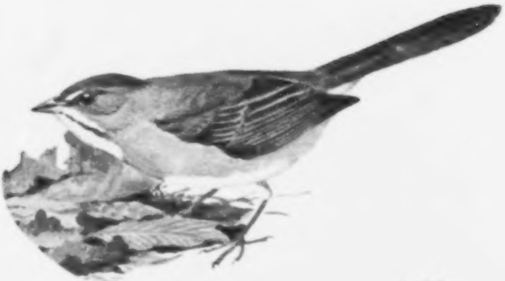
NEST: Builds a domed or nearly round nest 2 to 5 feet above the ground in tangles of shrubbery, pricklypear, or low shrubs, usually near the center of the plant.

FOOD: Forages on the ground scratching for insects and various seeds. (Little has been reported on food habits.)

REFERENCES: Bent 1968a, Harrison 1979, Oberholser 1974b.

Green-tailed Towhee

Pipilo chlorurus



L 6¼"

RANGE: Breeds from southeastern Washington, southern Idaho, southwestern Montana, northwestern and southeastern Wyoming south through the interior mountains to southern California, southern Nevada, and central Arizona to western Texas. Winters from southern California to western and southern Texas south to central Mexico; casual east of the breeding range in fall and winter.

STATUS: Fairly common.

HABITAT: Generally inhabits relatively arid and brushy foothills with shrubs such as sagebrush, deerbush, snowbrush, wild rose, spirea, manzanita, waxberry, and chokecherry, from 2,500 feet elevation in California to 10,500 feet in Arizona. Tends to breed at higher elevations in the south than in the north.

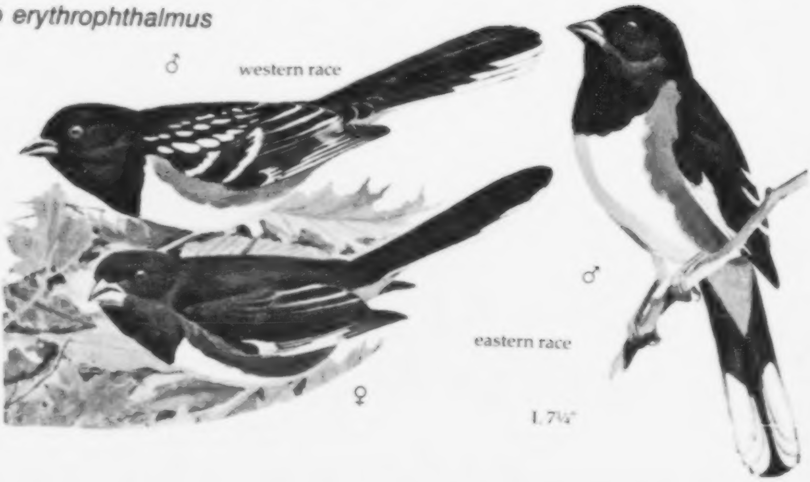
NEST: Builds a large, loosely constructed and deeply cupped nest on the ground or in low shrubs such as sagebrush, waxberry, and snowbrush, usually less than 2 feet above the ground.

FOOD: Forages on the ground, and eats berries, weed seeds, and insects. (Food habits studies are limited.)

REFERENCES: Bent 1968a, Harrison 1979, Johnsgard 1979.

Rufous-sided Towhee

Pipilo erythrophthalmus



RANGE: Breeds from southern British Columbia to southern Maine south to southern Baja California, Guatemala, northern Oklahoma, eastern Louisiana, and southern Florida. Winters from southern British Columbia, Utah, Colorado, the southern Great Lakes area, and along the Atlantic Coast south throughout the breeding range.

STATUS: Common and widespread.

HABITAT: Generally inhabits dense brushy fields and pastures, edges of woods, open woodlands, hedgerows, roadside thickets, and clearings. In the West, inhabits sagebrush, willows, and chaparral above the deserts.

SPECIAL HABITAT REQUIREMENTS: Dense brushy cover.

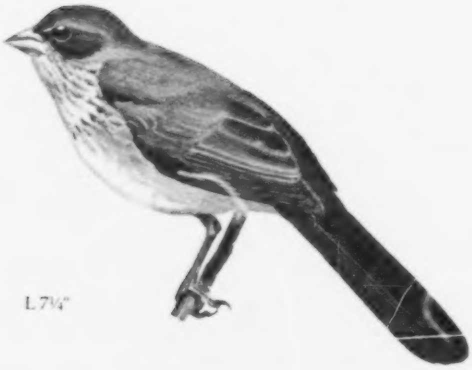
NEST: Builds a bulky nest, usually in a depression in the ground but sometimes up to 3 feet above the ground in low shrubs such as coffeeberry or sagebrush. Conceals and protects nest with overhanging bushes, logs, vines, or a clump of grass.

FOOD: Mostly eats vegetable material (about 70 percent of diet) gleaned from the ground; most important items are acorns, weed seeds and small fruits. Also eats insects, spiders, and snails.

REFERENCES: Baumann 1959, Bent 1968a, Davis 1960.

Brown Towhee

Pipilo fuscus



RANGE: Resident from southwestern Oregon, California (except higher mountains, deserts, and extensive forests), Arizona, southeastern Colorado, and west-central Texas south to central and western Mexico.

STATUS: Locally abundant.

HABITAT: Generally inhabits chaparral, brushland, woodlands, and open habitats such as lawns and gardens – chaparral and suburban gardens in Oregon and California; cholla cactus and pinyon-juniper in Colorado; the lower mountain canyons in Arizona; and low scrub habitats in New Mexico and Texas.

SPECIAL HABITAT REQUIREMENTS: Low shrubs.

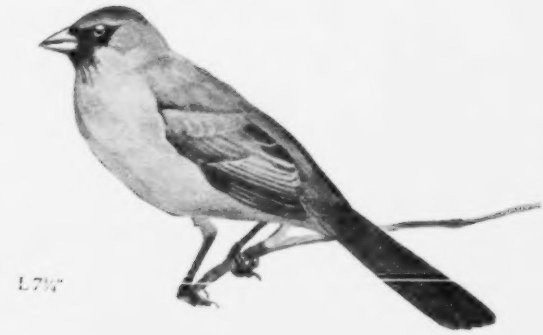
NEST: Builds a bulky nest ranging from ground level up to 35 feet above the ground (usually 3 to 12 feet) in a variety of shrubs and low trees. Usually places nest in the densest part of the foliage, supported by several branches.

FOOD: Forages on the ground for seeds and insects. Feeds insects to nestlings during summer; eats predominately weed seeds in winter. Also eats grain and small fruits.

REFERENCES: Bent 1968b, Johnsgard 1979, Terres 1980.

Abert's Towhee

Pipilo aberti



RANGE: Resident from southeastern California, extreme southeastern Nevada, southwestern Utah, central and southeastern Arizona, and southwestern New Mexico south to northeastern Baja California and northwestern Sonora.

STATUS: Common.

HABITAT: Lives yearlong in shrubby vegetation such as willow, cottonwood, mesquite, and arrowweed, usually near water courses. Less commonly inhabits baccharis and tamarisk, citrus groves, farms, and urban areas.

SPECIAL HABITAT REQUIREMENTS: Riparian shrubs.

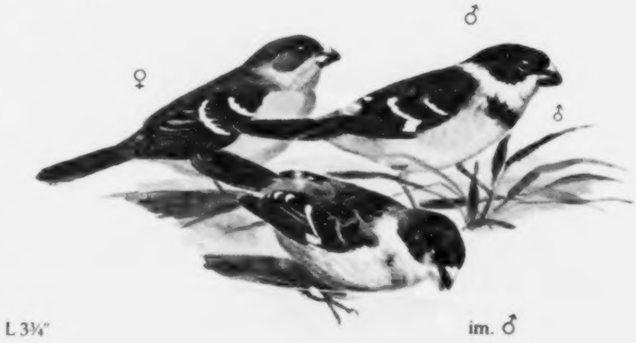
NEST: Builds a bulky nest, usually near the ground in low shrubs such as mesquite, elder, ash, umbrella trees, or arrowweed; occasionally in trees up to 30 feet above the ground.

FOOD: Apparently scratches in leaves on the ground, searching for seeds and insects. (No comprehensive study of food habits has been published.)

REFERENCES: Bent 1968b, Phillips et al. 1964, Terres 1980.

White-collared Seedeater

Sporophila torqueola



RANGE: Resident from southern Texas (the Rio Grand Valley north to Webb County), and northern Mexico south to Panama.

STATUS: Rare and irregular in Texas.

HABITAT: Generally prefers open, grassy places including pastures, roadsides, weedy fields, or marshlands covered with tall grasses in the vicinity of low-growing shrubs such as huisache or retaima.

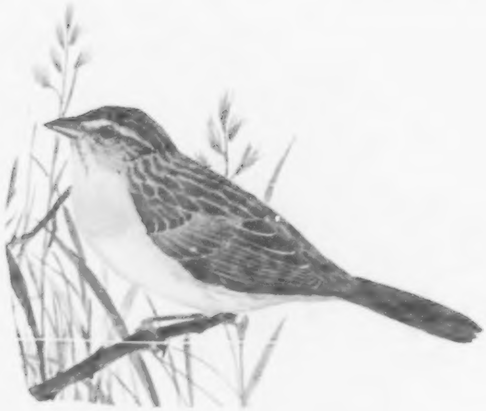
NEST: Builds a delicate cup nest 3 to 5 feet above the ground in crotches of weeds or low shrubs. Frequently nests in abandoned weedy fields, often in giant ragweed.

FOOD: Generally forages among low shrubs and weeds to glean seeds of grasses and forbs; also eats some insects. (Little has been reported on its food habits.)

REFERENCES: Bent 1968a, Oberholser 1974b.

Bachman's Sparrow

Aimophila aestivalis



L 5½"

RANGE: Breeds from south-central Missouri and central Indiana to central Maryland, south to eastern Texas, the Gulf Coast, and south-central Florida. Winters from eastern Texas, the Gulf States, and southeastern North Carolina south through the breeding range.

STATUS: Uncommon and local, with the population down over most of its range.

HABITAT: Generally favors brushy hillsides or wooded borders in the northern part of its range, and open pine stands with grasses and scattered shrubs, oaks, or other hardwoods in more southern areas. Inhabits pine barrens in South Carolina, grassy fields in Mississippi, grasslands with scattered young pines and blackberry thickets in Oklahoma, open pine stands in Florida, and limestone glades in Missouri.

SPECIAL HABITAT REQUIREMENTS: Dense herbaceous cover interspersed with, or bordered by, shrubs and trees.

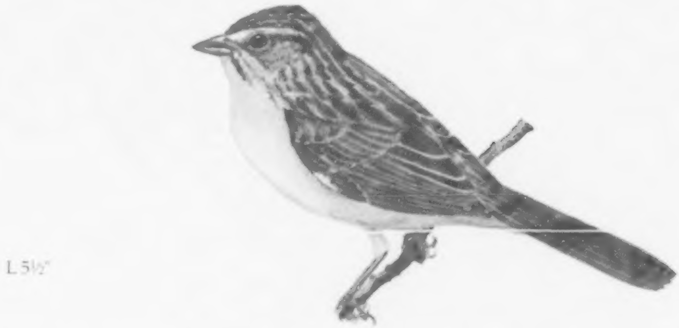
NEST: Constructs a well-concealed nest (open or domed) on the ground, usually under a low bush or against a tussock of grass, and often located at the outer edges of grass clumps in slight depressions, with a clear view in front of the nest.

FOOD: Forages on the ground primarily for insects and spiders, but also consumes seeds of a variety of plants.

REFERENCES: Hardin et al. 1982, Johnsgard 1979, Tate and Tate 1982, Weston in Bent 1968b.

Botteri's Sparrow

Aimophila botterii



RANGE: Breeds from southeastern Arizona and extreme southern Texas south to Costa Rica. Winters from northern Mexico south throughout the breeding range.

STATUS: Rare and local.

HABITAT: Only inhabits areas with dense, tall grass, breeding in open grassland and savannah, especially in areas with scattered brush or shrubs. Favors tall grass habitats with mesquite and catclaw in Arizona; prefers salt-grass with some yucca, pricklypear, and mesquite in the coastal prairies of Texas.

SPECIAL HABITAT REQUIREMENTS: Open grassland with scattered shrubs or small trees.

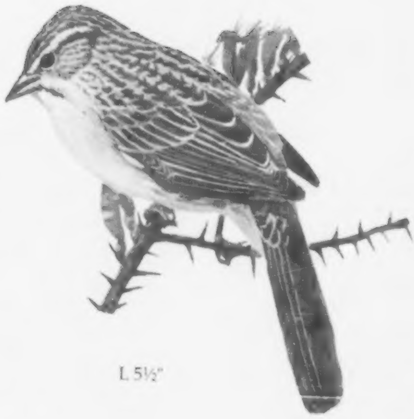
NEST: Builds nest on the ground among tall grasses, at the base of a tuft of grass, or sometimes under a projecting mat of grass.

FOOD: Primarily eats insects but also spiders and seeds.

REFERENCES: Cottam and Knappen 1939, Monson in Bent 1968b, Oberholser 1974b, Terrill in Farrand 1983c.

Cassin's Sparrow

Aimophila cassinii



L 5½"

RANGE: Breeds from southeastern Arizona, New Mexico, central and northeastern Colorado, southwestern Nebraska, and Kansas south into Mexico and Texas. Singing males may appear sporadically from southern California to South Dakota. Winters from southeastern Arizona and western and south-central Texas into Mexico.

STATUS: Common.

HABITAT: Prefers open grassland and short-grass plains with a few scattered shrubs or small trees. Also frequents mesquite grasslands if the mesquites are small with open areas throughout but will not usually inhabit areas that are entirely grass unless surrounded by a fence for perching. Occasionally occurs in or near mountainous areas, on grassy slopes with scattered yuccas or small oaks. Favors sandy prairies with scattered sage, yucca, cactus, mesquite, and shinnery oaks in Oklahoma. Apparently can breed where no drinking water is available locally.

SPECIAL HABITAT REQUIREMENTS: Short-grass plains with scattered shrubs.

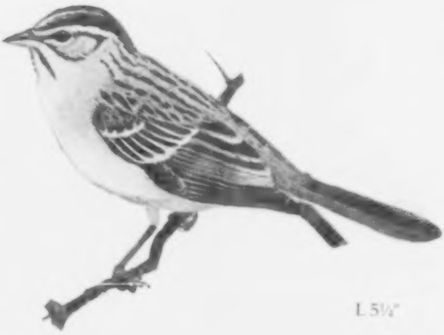
NEST: May nest either on the ground, or up to 12 inches above the ground in low bushes or among tangled branches of cacti. Typically places ground nests at the foot of small shrubby plants, concealed in weeds or placed in a tuft of grass.

FOOD: Eats mainly insects taken from the ground or the grass. In the winter, eats small seeds of weeds and grasses.

REFERENCES: Johnsgard 1979, Williams and LeSassier in Bent 1968b.

Rufous-winged Sparrow

Aimophila carpalis



L 5¼"

RANGE: Resident from south-central Arizona south into Mexico.

STATUS: Locally common.

HABITAT: Occurs in rather restricted, isolated colonies in open flat grassy areas with scattered thorn bushes, bunch grasses, mesquite, or cholla. Inhabits desert swales with wide grassy bottoms, leguminous brush, and low trees, washes with sandy bottoms but vegetated slopes; creeks bordered by broad-leaved trees, mesquite, grasses, and weeds; and brushy irrigation ditches.

SPECIAL HABITAT REQUIREMENTS: Grassy areas with scattered shrubs that are thorny or dense, preferably both.

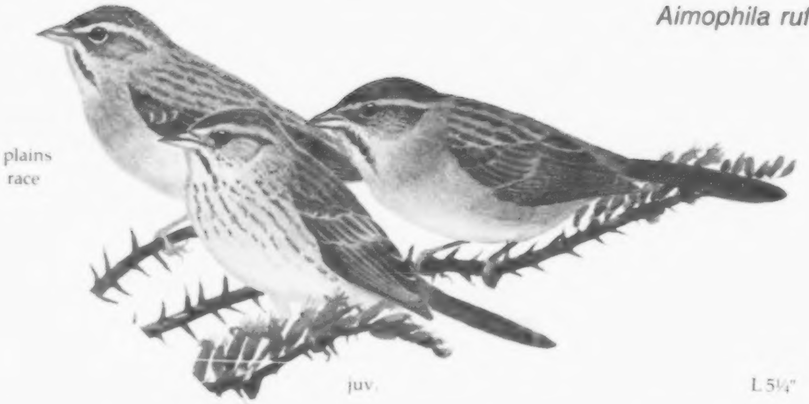
NEST: Nests in the edges of bushes such as hackberry, paloverde, cholla cacti, or mesquite, usually in a crotch or fork of a branch, 5 to 10 feet above the ground. Also will nest in dense clumps of mistletoe.

FOOD: During the nesting season, feeds on a variety of insects caught on the wing or gleaned from plant surfaces. During other seasons, presumably eats grass and weed seeds.

REFERENCES: Phillips in Bent 1968b, Phillips et al. 1964, Terres 1980, Terrill in Farrand 1983c.

Rufous-crowned Sparrow

Aimophila ruficeps



RANGE: Breeds from central California, southwestern Utah, southeastern Colorado, and central Oklahoma south into Mexico. Winters from northeastern New Mexico, northern Texas, and south-central Oklahoma south throughout the breeding range.

STATUS: Locally common.

HABITAT: Inhabits dry and desertlike habitats, preferring rocky, brushy, relatively arid hillsides with extensive bare areas. Also in rocky glades on the Great Plains; low ridges and foothills covered with scattered shrubs or trees and grass in Arizona; rocky slopes with large boulders, small cedars, and stunted oaks in Oklahoma; and grassy hillsides with scattered rocks and shrubs, especially sagebrush, and coastal scrub in California.

SPECIAL HABITAT REQUIREMENTS: Rocky, arid slopes with scattered brush and grass.

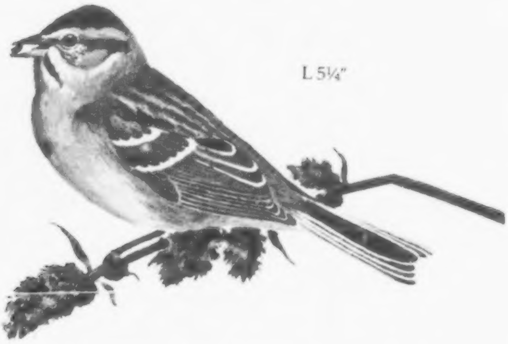
NEST: Usually builds nest in a small depression on the ground, often near or under a clump of grass, or at the base of a shrub or small tree. Also locates nests up to 2 feet above ground, wedged among dense verticle growing branches in shrubs and low trees.

FOOD: During the nesting season, feeds on a variety of insects and some spiders caught while foraging on or near the ground. In other seasons, eats some seeds.

REFERENCES: Cogswell in Bent 1968b, Johnsgard 1979, Phillips in Bent 1968b, Terres 1980, Terrill in Farrand 1983c, Verner and Boss 1980.

American Tree Sparrow

Spizella arborea



RANGE: Breeds from Alaska and northern Yukon across Canada to northern Quebec and Labrador, and south to northwestern British Columbia, northern Saskatchewan, and central Quebec. Winters from southern Canada south to northern California, northern and east-central Arizona, north-central Texas, Arkansas, and North Carolina.

STATUS: Common.

HABITAT: During the nesting season, inhabits scrub conifers, boggy meadows, and wet, hummocky tundra strewn with boulders and interspersed with willow, birch scrub, and other low shrubbery. Occurs as far north as scrubby growth is found, and in sparse forests just below treeline. In winter, frequents open country, weedy fields, brushy pastures, marshes, fencerows, hedgerows, and thickets.

SPECIAL HABITAT REQUIREMENTS: Scrubby trees or bushes for nesting.

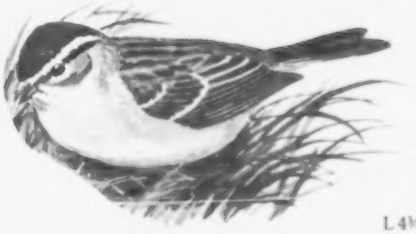
NEST: Usually constructs nest on or near the ground in a depression, in a tussock of grass, or atop a mossy hummock, placed at the base of a tree or shrub, and concealed by grasses. Occasionally, places nest up to 5 feet above ground in dwarf spruce or willow.

FOOD: In summer, primarily eats insects plus some plant material, while in winter, primarily eats seeds of weeds and grasses.

REFERENCES: Baumgartner 1937a, 1937b; Bent 1968b; DeGraff et al. 1980; Forbush and May 1955.

Chipping Sparrow

Spizella passerina



L 4¾"

RANGE: Breeds from east-central and southeastern Alaska and central Yukon to northern Manitoba, southern Quebec, and southwestern Newfoundland south to southwestern and east-central California, central and eastern Texas, the Gulf Coast, and northwestern Florida through the highlands of Mexico to Nicaragua. Winters from central California, northern Texas, Tennessee, and Maryland south in Mexico throughout the breeding range.

STATUS: Common.

HABITAT: Inhabits gardens, residential areas, farms, orchards, open coniferous and deciduous woodlands, forest edges and clearings, wooded borders of lakes and rivers, mountain meadows, and grassland habitats with scattered trees. Prefers habitats with trees surrounded by an open area with only herbaceous vegetation and some open ground for foraging. In winter, favors weedy fields and dry scrubland.

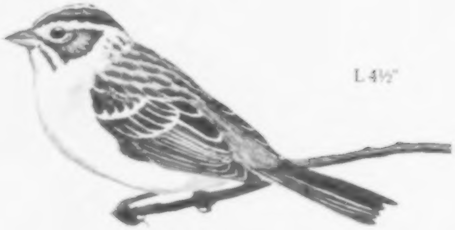
NEST: Builds nest 1 to 25 feet, but usually 3 to 10 feet, above ground in trees, especially conifers, shrubs, or vines. Generally locates nest near the trunk and top of smaller trees, or lower in the branches and farther from the trunk in larger open-grown trees, usually well concealed.

FOOD: Generally forages on the ground in open meadows or lawnlike areas gleaning insects and seeds.

REFERENCES: Beal and McAtee 1912, DeGraff et al. 1980, DeSante in Farrand 1983c, Forbush and May 1955, Johnsgard 1979, Johnson in Bent 1968b, Stull in Bent 1968b, Walkinshaw 1944.

Clay-colored Sparrow

Spizella pallida



RANGE: Breeds from eastern British Columbia and west-central and southern Mackenzie east to central Ontario, and south to eastern Washington, central Montana, eastern Colorado, northern Iowa, central and southeastern Michigan, and southwestern Quebec. Winters from central Texas to southern Mexico.

STATUS: Locally common.

HABITAT: Prefers midwestern mixed-grass prairies with scattered low thickets of shrubs such as wolfberry; will inhabit a variety of dry, uncultivated shrubby habitats, including grasslands with taller shrubs or small trees, brushy hillsides, overgrown clearings and pastures, parklands, brushy woodland edges, burned-over areas, weedy thickets along roads, swamps, fencerows, railroad tracks and fields, shelterbelts, and other early successional disturbed habitats.

SPECIAL HABITAT REQUIREMENTS: Open brushland.

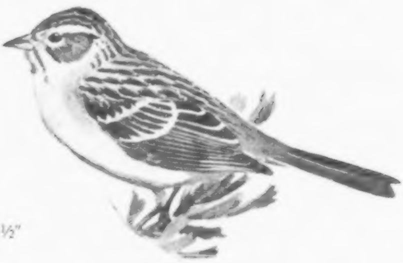
NEST: Builds nest either on the ground, well hidden in a tuft of grass at the base of a shrub or near a clump of weeds, or up to 4 1/2 feet above ground in a low shrub or small tree. Commonly uses snowberry, rosebushes, serviceberry, and conifers for nesting.

FOOD: Feeds primarily on a wide variety of weed and grass seeds, but will also eat insects in spring and summer, and willow catkins and the buds of elms and other trees in spring.

REFERENCES: Forbush and May 1955, Fox 1961, Hussong 1946, Johnsgard 1979, Knapton 1978, Root in Bent 1968b, Salt 1966.

Brewer's Sparrow

Spizella breweri



RANGE: Breeds from southwestern Yukon and northwestern interior British Columbia to southwestern Saskatchewan south, generally east of the Cascades and coast range, to southern California, central Arizona, central Colorado, and southwestern South Dakota. Winters from southern interior California to central Texas south into Mexico.

STATUS: Common.

HABITAT: Inhabits open, shrub-dominated habitats; arid sagebrush country in the West and scrub balsam-willow habitats in timberline areas of western Canada, as well as bunchgrass prairie with rabbitbrush, dry, brushy mountain meadows, and pinyon-juniper woodlands.

SPECIAL HABITAT REQUIREMENTS: Exposed scrub vegetation from desert regions in the south to timberline in Canada.

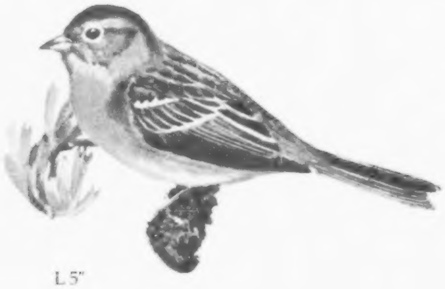
NEST: Builds nest in shrubs, especially sagebrush, almost always located less than 4 feet above the ground. At timberline, locates nest 6 inches above ground in birch trees, well concealed overhead by interlocking branches. Rarely nests on the ground.

FOOD: During winter, primarily eats weed seeds. In spring and summer, also consumes insects and spiders.

REFERENCES: Paine in Bent 1968b, Reynolds 1981.

Field Sparrow

Spizella pusilla



RANGE: Breeds from northwestern and southeastern Montana and northern North Dakota to southwestern Quebec and southern New Brunswick south to western Kansas, southern Texas, the Gulf Coast, and southern Georgia. Winters from Kansas to Massachusetts, and south to Mexico, the Gulf Coast, and southern Florida.

STATUS: Common.

HABITAT: Occurs in a variety of habitats that provide low grassy areas and shrubs or low trees, including old fields and pastures overgrown with briar thickets or deciduous underbrush, brushy fencerows, cut over pine forests and burned-over woodlands wherever briars and brush have regenerated, edges of open, unplowed fields, sagebrush flats, forest edges, and other similar habitats.

SPECIAL HABITAT REQUIREMENTS: Abandoned fields or other open areas with low shrubs or trees.

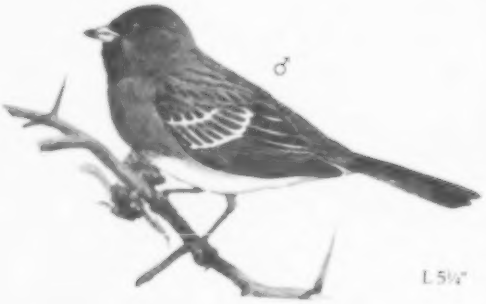
NEST: Early in the nesting season, usually builds nest on or near the ground in weed clumps or tufts of grass; later in nesting season, builds nest as high as 4 feet above the ground in shrubs or small trees. Locates nest in a wide range of plant species – grapevines, cinquefoil, blackberry bushes, boxelders, small oaks, and hickories.

FOOD: Gleans a variety of seeds of weeds and grasses from the ground throughout the year; in summer, also eats insects (40 percent of diet.)

REFERENCES: Best 1977, 1978, DeGraff et al. 1980, Forbush and May 1955, Fretwell 1968, Johnsgard 1979, Vickery in Farrand 1983c, Walkinshaw in Bent 1968b.

Black-chinned Sparrow

Spizella atrogularis



RANGE: Breeds from south-central California east to southern Nevada and southwest Utah, south to Arizona, New Mexico, western Texas, and Mexico. Winters from coastal California, southern Arizona, New Mexico, and Texas, south into Baja California and Mexico.

STATUS: Uncommon.

HABITAT: In desert regions, inhabits tall, dense sagebrush or other brushland areas covered with a variety of plant species. Prefers slopes with rocky outcrops and scattered pinyon or juniper trees. In the Far West, inhabits dry chaparral habitat with a variety of shrubs and scrub oak.

SPECIAL HABITAT REQUIREMENTS: Chaparral and sage habitat with rocky outcrops.

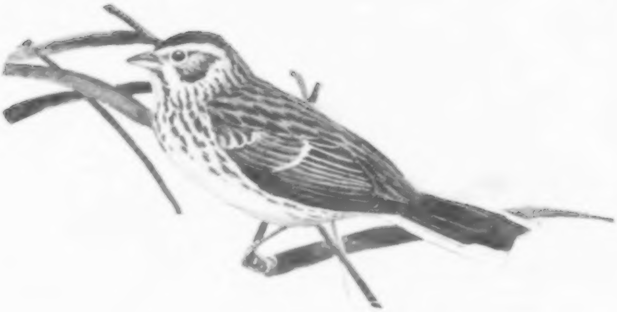
NEST: Generally builds a compact cup nest of dry grasses, often lined with animal hair, typically placed at the base of a shrub or in the lower portions of sage and shrub, occasionally up to 40 inches above the ground.

FOOD: Forages through sage and chaparral habitat, presumably taking a variety of seeds, berries, and soft-bodied insects. (Only limited information is available on its food habits.)

REFERENCES: Phillips et al. 1964.

Vesper Sparrow

Pooecetes gramineus



L 5½"

RANGE: Breeds from southern Mackenzie and central Saskatchewan to southern Quebec and Nova Scotia, south to eastern and southern California, central New Mexico, Kansas, and North Carolina. Winters from central California, central Texas, southern Illinois, and Connecticut south to Mexico, the Gulf Coast, and central Florida.

STATUS: Fairly common.

HABITAT: Favors sparsely vegetated dry uplands but also occurs in a variety of habitats throughout its range. In the West, inhabits open grasslands and sagebrush flats, pinyon-juniper associations, open meadows and farmlands, and low grassy areas of alpine and subalpine meadows. In the East, inhabits short-grass meadows, pastures, hayfields, country roadsides, prairie edges, blueberry barrens, coastal beachgrass, and, farther north, forest clearings and burned-over areas.

SPECIAL HABITAT REQUIREMENTS: Open areas with short herbaceous vegetation and conspicuous song perches.

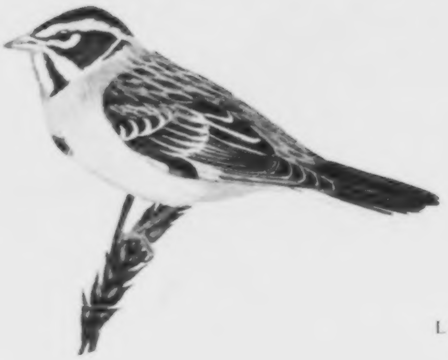
NEST: Builds nest in a depression on the ground, frequently near small patches of bare ground, where the vegetation is low and sparse, or at the base of a dirt clod, clump of weeds, or tussock of grass, often well concealed by surrounding live or dead vegetation.

FOOD: Gleans insects and seeds from the ground and from weeds and grasses; also forages on waste grains.

REFERENCES: Berger in Bent 1968b, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, King in Bent 1968b, Vickery in Farrand 1983c.

Lark Sparrow

Chondestes grammacus



L 5¼"

RANGE: Breeds from western Oregon and Washington, north into southern Canada, east through the Great Plains to the Missouri River, south throughout the Southwest into Mexico. Winters from central California, southern Arizona, and Texas south to Baja California, throughout Mexico, and in parts of the Gulf Coast up through South Carolina.

STATUS: Common throughout most of its range.

HABITAT: Generally inhabits open prairies and other open lands. In the spring, frequently found along roadsides with grassy vegetation, but prefers open areas with scattered brush and trees. Also inhabits forest edges, cultivated areas, orchards, fields, and savannahs.

SPECIAL HABITAT REQUIREMENTS: Dry fields with scattered bushes or trees or open edge.

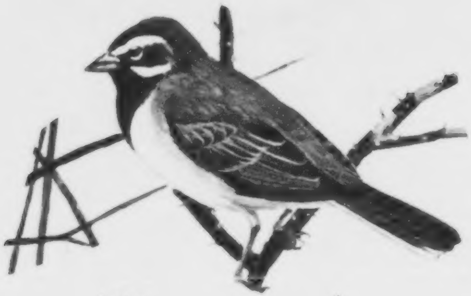
NEST: Builds nest either on the ground or in low trees or bushes. Breeds in the open but retires to the borders of open woodlands or brushy areas after the young have hatched.

FOOD: Eats both soft-bodied insects and seeds.

REFERENCES: Forbush and May 1955.

Black-throated Sparrow

Amphispiza bilineata



RANGE: Breeds from southeastern Oregon and northern California, east through the Great Basin, south into Baja California and Mexico. Winters from southern Arizona, New Mexico, and Texas, south into Baja California and Mexico.

STATUS: Common in parts of its range.

HABITAT: Inhabits thinly grassed pastureland with scattered mesquite, yucca, pricklypear, and cholla cacti. Generally found in dry uplands but extends into the depths of Death Valley.

SPECIAL HABITAT REQUIREMENTS: Arid areas with scattered shrubs including cactus, sage, and mesquite.

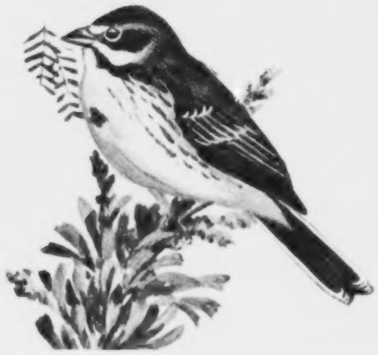
NEST: Generally conceals nest near the ground in small bushes or a variety of cactus species. Usually locates nest about 12 inches from the ground, fastened among forking branches of the low shrubs. Builds nest with small twigs and fibers of sage, frequently lining it with the fur of animals found in the area, such as rabbits.

FOOD: Eats a variety of insects as well as seeds that are available where it is breeding and wintering. Selects soft-bodied insects. Survives in areas lacking water by eating green vegetation or insects.

REFERENCES: Johnsgard 1979.

Sage Sparrow

Amphispiza belli



L 5"

RANGE: Breeds from central Washington and eastern Oregon, east through the Great Basin into Wyoming and Colorado, south to southern California, Arizona, and New Mexico. Resident from southern California, into Baja California and parts of Arizona. Winters in parts of Arizona, New Mexico, eastern Texas, and northern Mexico.

STATUS: Common in parts of its range.

HABITAT: Prefers sage habitat where sagebrush, saltbush, and chaparral are found. Often found in and among the bushes in the Great Basin region and other dry desert areas.

SPECIAL HABITAT REQUIREMENTS: Sagebrush and chaparral with scattered bushes.

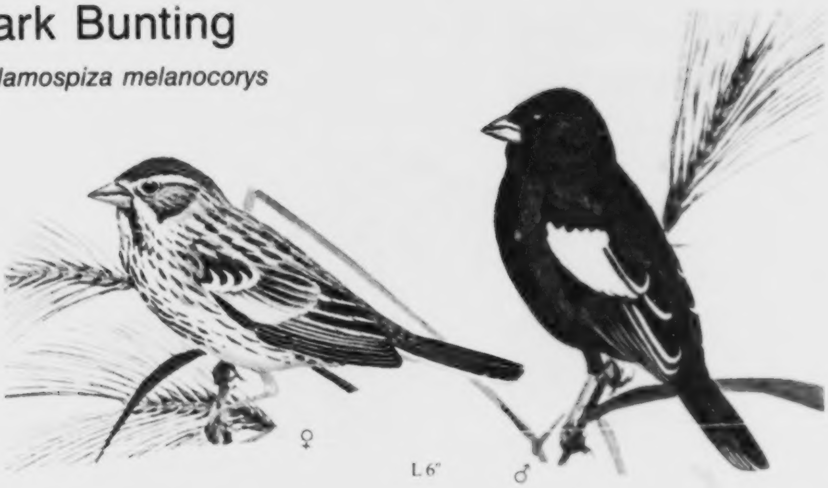
NEST: Usually nests in low shrubs in desert regions, but sometimes in small depressions on the ground. Places nest 6 to 18 inches above the ground, often built into the body of the bush so the foundation is firmly placed. Builds nest of sticks and twigs, often lining it with animal hair and dry grass.

FOOD: Eats soft-bodied insects, ants, and spiders, often obtained from the ground or low in bushes. In winter, primarily eats small seeds and other plant materials.

REFERENCES: Reynolds 1981.

Lark Bunting

Calamospiza melanocorys



RANGE: Breeds from southern Alberta to southwestern Minnesota, and south, east of the Rockies, to eastern New Mexico, the Texas Panhandle, and northwestern Missouri; also locally or sporadically in southern California and Utah to west-central Texas. Winters from southern California to north-central Texas south into Mexico and southern Louisiana.

STATUS: Common; on the Blue List because of overall declines in population.

HABITAT: On the western Great Plains, inhabits mixed short-grass prairie and other areas of predominately low growth, but also areas of taller grasses with scattered shrubs and disturbed grasslands. Also inhabits sagebrush, fenced pastures, cultivated or fallow alfalfa or clover croplands, weedy roadsides, meadows, and areas of relatively barren ground.

SPECIAL HABITAT REQUIREMENTS: Open habitats with relatively short, herbaceous vegetation.

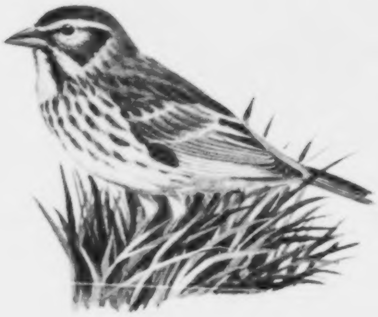
NEST: Builds nest in a depression in the ground, usually well concealed by grasses or other prairie plants, often located near the base of a plant or plant debris.

FOOD: Feeds on the ground, taking primarily insects during the summer, especially grasshoppers. In other seasons, eats seeds of weeds and grasses predominately.

REFERENCES: Ballard in Farrand 1983c, Baumgartner in Bent 1968b, Forbush and May 1955, Johnsgard 1979, Tate and Tate 1982.

Savannah Sparrow

Passerculus sandwichensis



L 4¾"

RANGE: Breeds from Alaska and northern Yukon to northern Labrador and Newfoundland, south in coastal regions to west-central California, and in the interior to central California, northern New Mexico, Nebraska, Kentucky, and New Jersey. Winters from southern British Columbia and southern Nevada to southern Kentucky and, east of the Appalachians, from Massachusetts south into Mexico. Resident in coastal southern California.

STATUS: Common throughout its range, although the population is down in the western mountains.

HABITAT: Inhabits open wet areas with grass or grasslike vegetation. Occurs in hayfields, pastures, coastal and inland marshes, grassy dunes, wet meadow zones of ponds, lakes, and streams, prairies, open grasslands, bogs, open moist areas of mountain parks and meadows, and tundra.

SPECIAL HABITAT REQUIREMENTS: Dense grassy or herbaceous vegetation of moderate height.

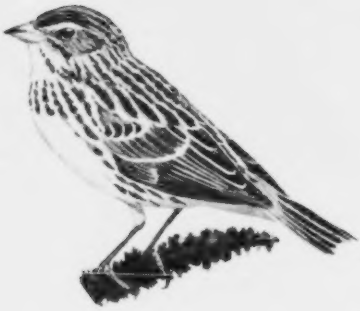
NEST: Places nest in a natural hollow or scratched-out depression in the ground, among thick herbaceous cover, usually well hidden, not only by the dense cover surrounding the nest but also by overhanging vegetation.

FOOD: During summer, mostly eats insects, concentrating primarily on beetles and grasshoppers; also consumes some spiders and snails and gleans a wide variety of seeds.

REFERENCES: Baird in Bent 1968b, DeGraff et al. 1980, Elliott in Bent 1968b, Forbush and May 1955, Johnsgard 1979, Potter 1972, Taber in Bent 1968b, Tate and Tate 1982, Welsh 1975.

Baird's Sparrow

Ammodramus bairdii



RANGE: Breeds from southeastern Alberta to southern Manitoba south to central and eastern Montana, southern South Dakota, and west-central Minnesota. Winters from southeastern Arizona to north-central Texas south into Mexico.

STATUS: Uncommon. Of special concern on the Blue List as population is down on its breeding range.

HABITAT: Favors large areas of prairie grassland with tangles of old and new grasses and patches of shrubs such as snowberry, wolfberry, rose, and willow. Also inhabits ungrazed or lightly grazed mixed-grass prairies, moist meadows, tall-grass prairies associated with wetlands, drier rangelands, fallow and stubble fields, and hayfields. May abandon an area after plowing, burning, mowing, or raking.

SPECIAL HABITAT REQUIREMENTS: Relatively undisturbed or reclaimed grassy prairie with scattered shrubs.

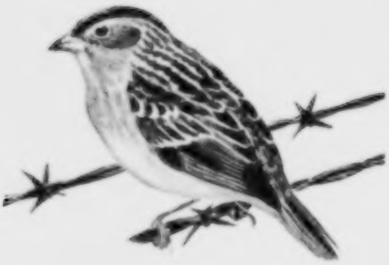
NEST: Nests on the ground, preferably in tall, dense grass or other dense herbaceous vegetation. Places nest in a hollow of a tuft of grass supported by a shrub, well concealed on the ground by overhanging vegetation, or most commonly, in a natural hollow or a shallow excavated depression, with no overhead concealment.

FOOD: Forages on the ground for a variety of seeds throughout the year, but consumes many insects in summer.

REFERENCES: Cartwright et al. 1937, Johnsgard 1979, Lane in Bent 1968b, Tate and Tate 1982.

Grasshopper Sparrow

Ammodramus savannarum



L 4½"

RANGE: Breeds from southern interior British Columbia and southern Alberta to southwestern Quebec and southern Maine south to southern California, central Colorado, northern and south-central Texas, central Georgia, and central North Carolina. Winters from central California (rare) and southern Arizona to Tennessee and North Carolina south to Central America.

STATUS: Common, but population is declining from the Dakotas and Nebraska east to New York and Maryland.

HABITAT: Prefers prairies in the West and cultivated grasslands, especially those with orchardgrass, alfalfa, red clover, and bush clover, in the East. Inhabits mixed-grass, short-grass, and tall-grass prairies, sage prairies, small grain fields and weedy fallow fields. Avoids fields containing more than 35 percent shrubs, but will occupy grassy habitats with some scattered trees.

SPECIAL HABITAT REQUIREMENTS: Continuous tall herbaceous cover and conspicuous song perches.

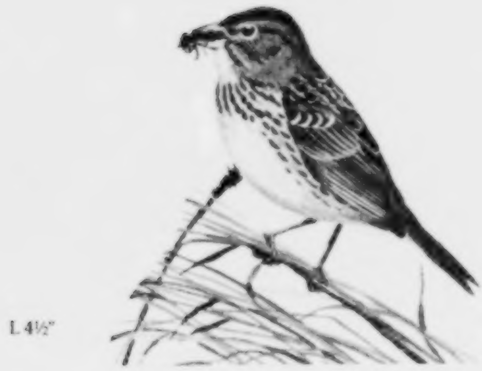
NEST: Builds nest in a slight depression on the ground, usually well hidden at the base of a clump of grass or other vegetation, with vegetation arched over the top. May nest singly or in small colonies.

FOOD: Gleans food from the ground. Consumes a diet that is 63 percent insects from fall to spring; also includes spiders, snails, and seeds.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Smith 1963, Bent 1968b, Tate and Tate 1980.

Henslow's Sparrow

Ammodramus henslowii



RANGE: Breeds from eastern South Dakota and central Minnesota east to northeastern Massachusetts, and south to central Kansas, northern Kentucky, and east-central North Carolina; also locally in eastern Texas. Winters in coastal states from South Carolina south to Florida, and west to Texas.

STATUS: Uncommon to rare and local. Of special concern on the Blue List due to continued decline in population.

HABITAT: Inhabits meadows and neglected weedy or grassy fields, (often with scattered low bushes) generally preferring situations that are low-lying and damp, but occasionally inhabiting dry or cultivated uplands. Also, inhabits broomsedge fields, old pasturelands, and the drier edges surrounding salt marshes. In winter, frequents grassy openings in pine woods and second-growth woodlands.

SPECIAL HABITAT REQUIREMENTS: Habitats with dense herbaceous vegetation, ground litter, an intermediate moisture range, and singing perches.

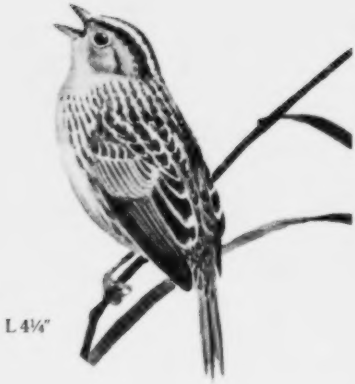
NEST: Nests singly or in loose colonies. Places nest in a depression on the ground, at or near the base of a thick grass clump with the base of the nest just above the ground, or 6 to 20 inches above the ground attached to vertical stems of herbaceous vegetation. Conceals nest under overhanging vegetation.

FOOD: During spring, summer, and fall, primarily eats insects (82 percent) and some seeds of weeds and grasses (18 percent) gleaned from the ground.

REFERENCES: Forbush and May 1955, Hyde 1939, Robins 1971, Tate and Tate 1982.

Le Conte's Sparrow

Ammodramus leconteii



RANGE: Breeds from east-central British Columbia, southern Mackenzie, and northern Saskatchewan to west-central Montana, northern North Dakota, and northern Michigan. Winters from west-central Kansas, southern Illinois, central Alabama, and South Carolina south to Texas, the Gulf Coast, and southeastern Georgia.

STATUS: Common.

HABITAT: Inhabits damp, grass-grown clearings, shallow prairie marshes, tall moist grasslands, sedge marshes often surrounded by bog, and open fens in boreal forests. Prefers hummocky alkaline wetlands.

SPECIAL HABITAT REQUIREMENTS: Moist habitats with dense herbaceous vegetation.

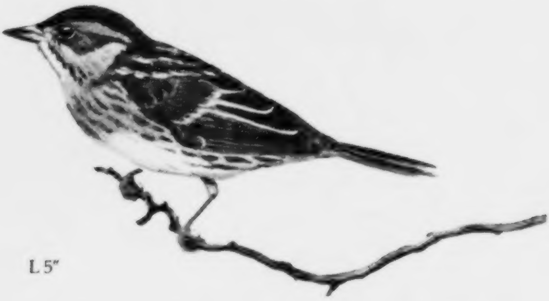
NEST: Builds a well-concealed nest on or near the ground in the luxuriant growth of drier borders of open wetlands, usually of grasses interwoven among standing plant stems, generally in dense vegetation beneath tangles of old dead rushes, grasses, or sedges.

FOOD: Primarily eats insects during summer, but consumes mainly the seeds of weeds and grasses at other times. Gleans both insects and seeds from marsh plants. (Little is known about the food habits of this species.)

REFERENCES: Forbush and May 1955, Easterla 1962, Johnsgard 1979, Murray 1969, Walkinshaw in Bent 1968b.

Sharp-tailed Sparrow

Ammodramus caudacutus



RANGE: Breeds from east-central British Columbia, southern Mackenzie, and central Manitoba south to south-central Alberta, southeastern South Dakota, and northwestern Minnesota; also around James Bay, in southeastern Quebec, and along the Atlantic Coast from eastern Quebec south to North Carolina. Winters along the Atlantic Coast from New York south to Florida, the Gulf Coast west to Texas, and rarely in coastal California.

STATUS: Common along the coast, locally common inland.

HABITAT: In coastal areas, prefers short grasses in drier sections of salt or brackish marshes, especially where marshhay cordgrass and seashore saltgrass are present. Inland races inhabit freshwater marshes, marshy zones of prairie lakes and ponds, wet meadows, sloughs, and alkaline, hummocky fens.

SPECIAL HABITAT REQUIREMENTS: Well-drained sections of wetland with grassy or other herbaceous vegetation.

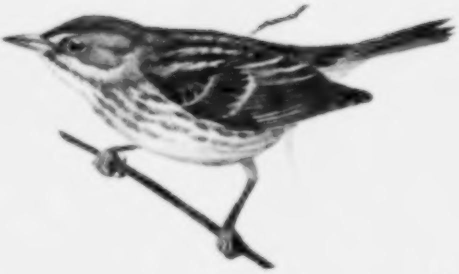
NEST: In coastal areas, builds nest in higher regions of marshes seldom flooded by tides, salt hay meadows, or the zone between marsh and upland. Elevates and conceals nest just above ground, sometimes attached to upright plant stems or placed in thick clumps of grass. Inland, nests are usually sunken in the ground but occasionally elevated.

FOOD: Forages on the banks of pools and creeks, gleaning primarily insects and small aquatic animals, but also seeds of grasses and weeds from the ground and low vegetation. Generally feeds throughout the marsh, although in coastal areas, prefers to forage in grass that is dense and matted.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Hill in Bent 1968b, Johnsgard 1979, Low and Mansell 1983. Murray 1969, Woolfenden 1956.

Seaside Sparrow

Ammodramus maritimus



L 5½"

RANGE: Breeds along the Atlantic Coast from Massachusetts south to northern Florida, and along the Gulf Coast from southern Texas east to western Florida. Winters throughout the breeding range to southern Florida, although most northern populations usually withdraw southward. Resident in southern and east-central Florida.

STATUS: Locally common, however the dusky race in east-central Florida is on the verge of extinction, and the Cape Sable race in southern Florida is endangered.

HABITAT: Inhabits short-grass tidal marshes and meadows (except for the Cape Sable race, which occurs in a narrow band of fresh and brackish marshes in southern Florida). Prefers rank stands of cordgrass along the borders of tidal creeks with muddy bottoms.

SPECIAL HABITAT REQUIREMENTS: Tidal salt marshes.

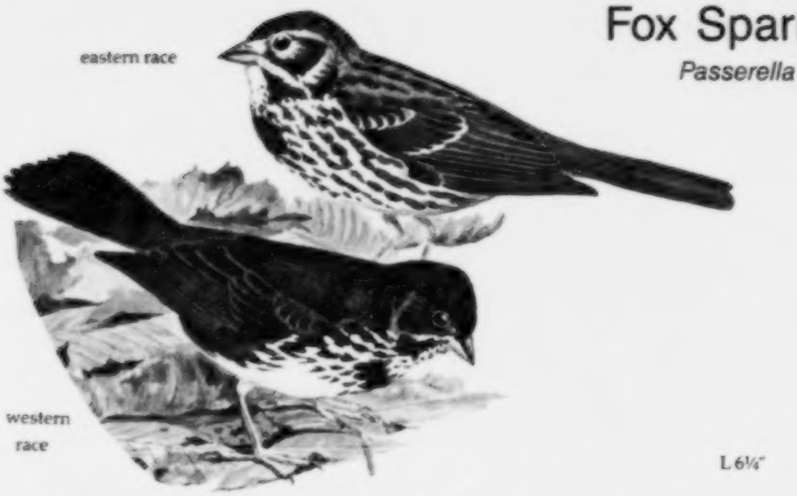
NEST: Builds nest above ground in cordgrass or rushes in wetter portions of salt marshes washed by the tide, on the ground in dense vegetation above the high tide mark, or in shrubs such as marsh-elders. Typically locates well-concealed nest up to a foot above ground. Generally, nests in wetter areas than the sharp-tailed sparrow.

FOOD: East mostly insects, crustaceans, and small marine life and some seeds of weeds and grasses. Prefers to forage in areas of open mud and smooth cordgrass along the edge of marshes, gleaning its prey from the ground and surrounding vegetation.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Petersen in Farrand 1983c, Sprunt in Bent 1968b, Stimson in Bent 1968b, Woolfenden 1956.

Fox Sparrow

Passerella iliaca



RANGE: Breeds from Alaska and the Yukon to northern Quebec and northern Labrador, south to northwestern Washington, in the western mountains to southern California and central Colorado, and east of the Rockies, across central Canada to southern Quebec. Winters from southern Alaska and southern British Columbia south through the Pacific States, and from central Arizona, Kansas and New Brunswick south to Mexico and central Florida.

STATUS: Common.

HABITAT: Fairly nonspecific in its requirements, needing only dense, shrubby undergrowth. Inhabits a wide variety of habitats throughout its range, including the undergrowth of deciduous or coniferous forests, brushy woodland edges, woodland thickets, chaparral, burns, cut over areas, scrub, riparian woodlands, willow thickets, and montane coniferous scrub.

SPECIAL HABITAT REQUIREMENTS: Dense shrubby undergrowth.

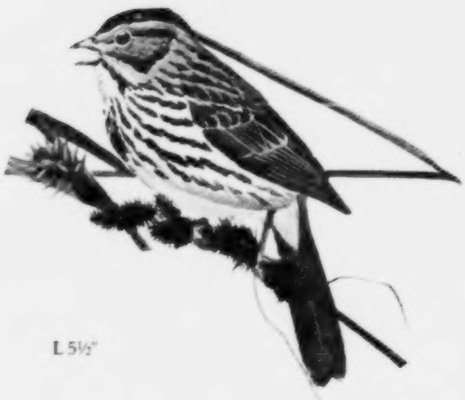
NEST: Commonly locates nest on the ground, well-concealed by surrounding tangles of vegetation, or in a bush or tree, typically less than 6 feet, but up to 20 feet above the ground. Prefers conifers for nesting.

FOOD: Feeds primarily on insects in summer and on seeds of weeds and some grasses in winter. Forages on the ground, scratching in leaf litter under shrubs and in weed patches.

REFERENCES: Austin in Bent 1968c, Forbush and May 1955, Terrill in Bent 1968c, Verner and Boss 1980.

Song Sparrow

Melospiza melodia



L 5½"

RANGE: Breeds from Alaska across Canada, south of Hudson Bay, to Newfoundland and south across the northern part of the United States, along the Pacific Coast, and into Mexico. Resident throughout the northern part of the United States and Pacific Coast. Winters coastally from Alaska and Newfoundland south throughout the southern half of the breeding range.

STATUS: Common throughout the eastern United States and northern parts of its range. Locally common in the West.

HABITAT: Inhabits moist areas with low irregular plants, or deep grassy and brushy vegetation. Particularly common along waterways, seacoasts with marshes of cattails or bulrushes, and along forest edges adjacent to bogs and openings. Also inhabits fencerows, thickets, hedgerows, and gardens.

SPECIAL HABITAT REQUIREMENTS: Moist areas with brushy vegetation.

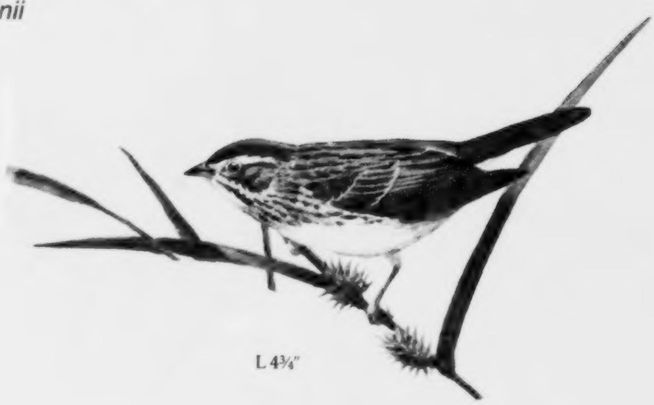
NEST: Usually builds nest on the ground, concealed under a tuft of grass or bush, or even a brushpile, but sometimes in shrubs and small trees up to 12 feet above ground, and in tree cavities.

FOOD: Eats a wide variety of both vegetable and animal materials. Gleans insects from the ground, leaves, and branches, mostly during the breeding season.

REFERENCES: Nice 1937, 1943, Forbush and May 1955.

Lincoln's Sparrow

Melospiza lincolnii



RANGE: Breeds from western central Alaska across most of Canada, south along the Pacific Coast and the Rocky Mountains in southern California and northern New Mexico, and into the northern Lake States and northern New England. Winters from southern California, southern Arizona, Texas, and New Mexico south throughout Mexico to Costa Rica. Migrates throughout continental North America between its breeding and wintering ranges.

STATUS: Common.

HABITAT: Prefers bogs, wet meadows, and riparian thickets. Also inhabits hedgerows, fencerows, and the understory of open woodlands, as well as forest edges, clearings, and shrubby areas.

SPECIAL HABITAT REQUIREMENTS: Thickets along the edge of fields, waterways, or in wet meadows.

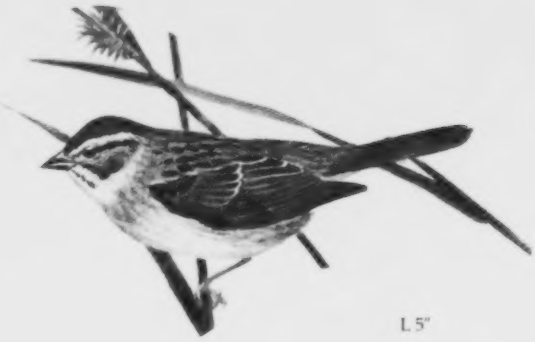
NEST: Usually places nest on the ground in a shallow depression. Builds a rather frail structure of leaves, moss, and some grasses.

FOOD: Eats both animal and vegetable materials. During breeding season, mostly eats animal material, including a variety of insects, spiders, and millipedes. During winter, mostly eats grain and grass seed.

REFERENCES: Forbush and May 1955.

Swamp Sparrow

Melospiza georgiana



L 5"

RANGE: Breeds from west-central and southern Mackenzie and northern Manitoba across to southern Labrador, and south to northeastern and east-central British Columbia, the Dakotas, northern Illinois, and Maryland. Winters from eastern Nebraska through the Great Lakes region to Massachusetts, south to Texas, the Gulf Coast, and Florida, and west across New Mexico to southeastern Arizona.

STATUS: Common.

HABITAT: Wetlands with bushes, rank marsh grasses, sedges, and reeds are characteristic habitat. Inhabits brushy wet meadows, sloughs, bogs, swamps, freshwater marshes, along swampy shorelines of lakes or streams, and rarely in coastal brackish meadows. Avoids heavily wooded wetlands. In winter, frequents springs, seeps, and open brooks that have brushy cover nearby.

SPECIAL HABITAT REQUIREMENTS: Swampy wetlands with rank emergent vegetation.

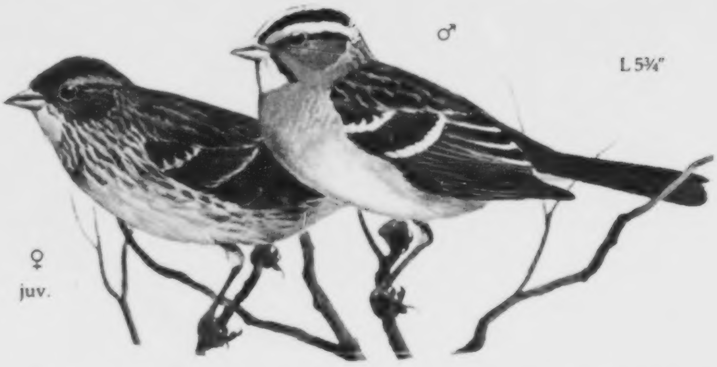
NEST: Often builds nest among cattail stalks, upon clumps of bent over vegetation, on sedge tussocks, or in bushes, frequently directly over water that may be 2 feet or more deep. Usually places nest about 12 inches above ground or water, preferably in areas with mixed vegetation rather than in pure cattails.

FOOD: Feeds mainly on insects in spring and early summer, and on the seeds of marsh plants in late summer and fall. Gleans food while wading in shallow water or from surrounding vegetation.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Low and Mansell 1983, Martin et al. 1951, Petersen in Farrand 1983, Wetherbee in Bent 1968c.

White-throated Sparrow

Zonotrichia albicollis



RANGE: Breeds from southeastern Yukon and west-central and southern Mackenzie to southern Labrador and Newfoundland south to central interior British Columbia, north-central North Dakota, northern Wisconsin, and northern New Jersey. Winters from southeastern Iowa and southern Wisconsin east to Massachusetts, south to Mexico, the Gulf Coast, and Florida, and west across Texas to California.

STATUS: Abundant.

HABITAT: Inhabits coniferous and northern deciduous forests, favoring semiopen wooded areas with dense undergrowth or brush, including brushy clearings, cutover woodlands, second-growth, forest edges, borders of swamps and bogs, and other shrubby growth. Seldom found far from dense cover.

SPECIAL HABITAT REQUIREMENTS: Open woodlands with dense cover in the form of dense woody undergrowth, thickets, or brush.

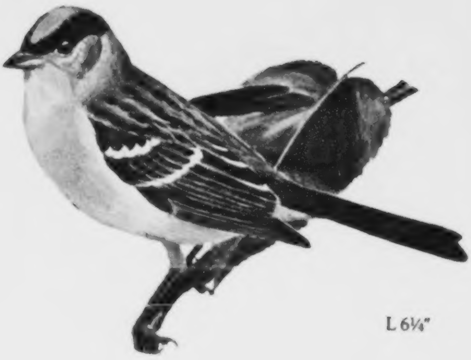
NEST: Usually builds nest on the ground at the edge of a clearing in areas with small trees, clumps of shrubs, and extensive ground cover of herbs, grasses, and often blueberries. Usually locates nest near a large object such as a tree, stump, or log that possibly serves as a lookout perch; conceals nest by surrounding ground vegetation. Occasionally nests above ground in dense bushes, roots of upturned stumps, or in brush heaps.

FOOD: Feeds primarily on the seeds of grasses and weeds, and on wild fruits, but consumes a considerable quantity of insects when available. Forages largely on the ground, scratching in leaf litter or gleaning weeds and grasses for its food.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Lowther and Falls in Bent 1968c.

Golden-crowned Sparrow

Zonotrichia atricapilla



RANGE: Breeds from western and north-central Alaska along the coastal region, south-central Yukon, southern British Columbia, and into the extreme northern part of Washington. Winters from southern Alaska and southern British Columbia, mostly west of the Cascades, to northern Baja California. Also occurs in southeastern California and parts of Arizona, Utah, Colorado, and New Mexico.

STATUS: Common.

HABITAT: Generally inhabits high-elevation thickets and shrubs, and often dwarf conifers found in brushy canyons. In winter, found in dense brush thickets and chaparral, and gardens along the West Coast.

SPECIAL HABITAT REQUIREMENTS: Openings in high-elevation coniferous forests, particularly spruce forests.

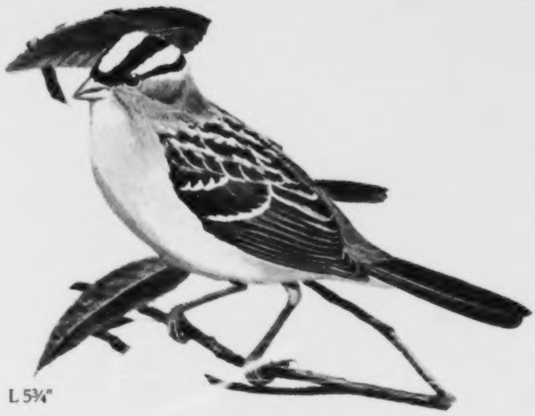
NEST: Builds a nest of bulky material, such as ferns, leaves, and dry grass, on the ground or above ground on horizontal branches of small trees, usually well concealed.

FOOD: Eats mainly seeds, shoots from plants, buds, and flowers of grasses and forbs. Also gleans small insects from trees, branches, shrubs, and grass.

REFERENCES: Verner and Boss 1980.

White-crowned Sparrow

Zonotrichia leucophrys



RANGE: Breeds throughout Alaska, the northern regions of Canada surrounding the Arctic Ocean-Hudson Bay region, east to the Atlantic, south through the Yukon and British Columbia, through the Rocky Mountains, west to the Pacific Coast and the Sierra Nevadas. Winters throughout most of the United States, except Florida and the northern Great Plains, and in Mexico.

STATUS: Abundant.

HABITAT: Frequents valleys, brushy hillsides, roadside vegetation, and cultivated fields. In arctic regions, inhabits open stunted tree growth and brushlands. Uses edge habitats and brush piles during winter.

SPECIAL HABITAT REQUIREMENTS: Thickets, hedgerows, or edge.

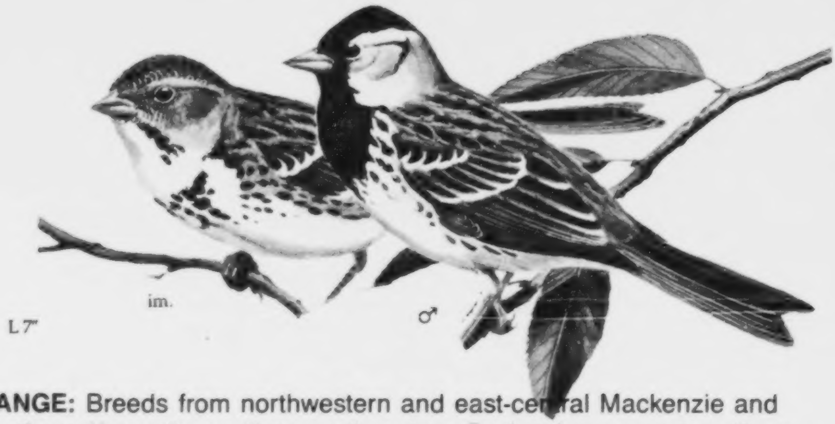
NEST: Often builds nest consisting of grassy materials, mosses, and lichens, lined with rootlets or animal hairs, placing it on the ground in a moss or lichen bed, in grassy areas, but sometimes on the lower branches of shrubbery. Most nests are well concealed and difficult to locate.

FOOD: Obtains both plant and animal foods by scratching in the soil. Eats the fruiting bodies of mosses, as well as a variety of seeds, and capitalizes on outbreaks of insects.

REFERENCES: Beal and McAtee 1912, Forbush and May 1955.

Harris' Sparrow

Zonotrichia querula



RANGE: Breeds from northwestern and east-central Mackenzie and southern Keewatin south to northeastern Saskatchewan and northern Manitoba. Winters primarily along the eastern edge of the Great Plains, although it may be found from southeastern Alaska and southern British Columbia to northern Colorado and central Iowa, and south to California, Texas, and western Tennessee.

STATUS: Fairly common.

HABITAT: Breeds in the Canadian subarctic, in open clearings, woodland edges, and brushy margins of burned-over areas bordered by spruce forests. During winter, inhabits brushy habitats, preferring woodlot borders and hedgerows.

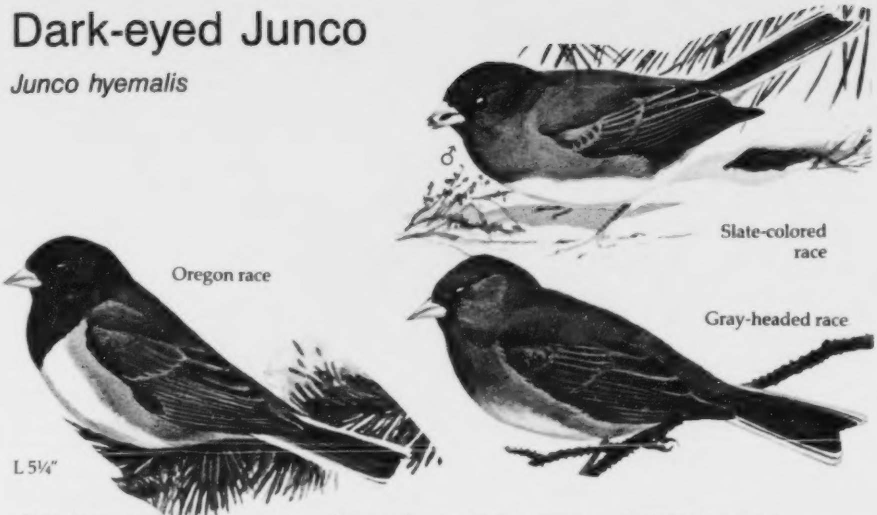
NEST: Builds nest in the ground, usually in mossy hummocks surrounded by water near stunted spruce trees, often under a low shrub on a sheltered southern exposure. May also locate nest in dry clearings under small trees within 100 feet of a lake.

FOOD: At all seasons, chiefly eats seeds of weeds, grasses, and wild fruits, but includes insects in diet, especially in summer. Primarily feeds on the ground.

REFERENCES: Baumgartner in Bent 1968c, Forbush and May 1955, Kaufman in Farrand 1983c, Semple and Sutton 1932.

Dark-eyed Junco

Junco hyemalis



RANGE: Breeds from Alaska and central Yukon to Labrador and Newfoundland, south to central coastal California, in the mountains to eastern California, central Arizona, and western Texas, southern Alberta, northern and east-central Minnesota, central Michigan, southern New England, and in the Appalachian Mountains to northern Georgia and northwestern South Carolina; also in the Black Hills. Winters from central and south coastal Alaska, coastal British Columbia and across southern Canada south to Mexico, the Gulf Coast, and northern Florida.

STATUS: Common to abundant.

HABITAT: Occurs from sea level to timberline in a variety of wooded habitats that have openings with dense herbaceous ground cover, including coniferous and deciduous forests, forest edges, woodland clearings, stream borders, open woodlands, brushy cover bordering mountain meadows, and old burns. Avoids deep forest interiors in favor of woodland edges and openings. In winter, prefers weedy fields but also inhabits open woodlands, hedgerows, suburbs, and farmyards.

SPECIAL HABITAT REQUIREMENTS: Openings in wooded habitats covered with dense herbaceous vegetation such as grasses or forbs.

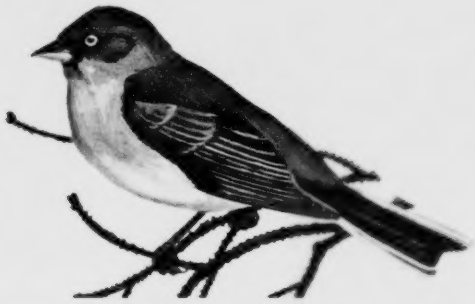
NEST: Commonly builds nest on the ground near the edge of openings in wooded areas or in a slight depression, usually well concealed under weeds, grasses, fallen logs, tree roots, or other overhead shelter. Occasionally may place nest up to 8 feet above ground in a shrub or tree.

FOOD: Forages on the ground, picking up seeds (mostly) and insects.

REFERENCES: Barrowclogh in Farrand 1983c, Beal and McAtee 1912, DeGraff et al. 1980, Eaton in Bent 1968b, Hostetter 1961, Martin et al. 1951, Phelps in Bent 1968b, Sprunt in Bent 1968b, Thatcher in Bent 1968b, Whitney in Bent 1968b.

Yellow-eyed Junco

Junco phaeonotus



L 5½"

RANGE: Resident from southern Arizona and parts of New Mexico to central Mexico.

STATUS: Locally common.

HABITAT: Prefers coniferous forests and pines or oaks that are relatively open, usually above 5,000 feet. Often inhabits areas adjacent to scrub, pastures, and fields.

SPECIAL HABITAT REQUIREMENTS: Coniferous and pine-oak forests; edge-type habitat appears to be important.

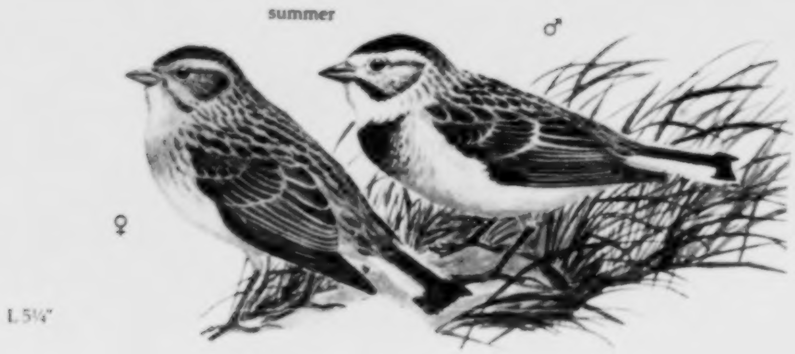
NEST: Usually builds cup-shaped nest on the ground under a clump of grass or log, near a flat stone, or sometimes on the ground under a drooping pine limb or in a thick shrub.

FOOD: Feeds primarily on seeds and other vegetable material as well as some insects. Forages on the ground, but occasionally removes animal or vegetable material from the limbs of trees. Occasionally eats fruits.

REFERENCES: Bent 1968b.

McCown's Longspur

Calcarius mccownii



RANGE: Breeds from southeastern Alberta east to north-central North Dakota, and south to northeastern Colorado and northwestern Nebraska. Winters from central Arizona, west-central Kansas, and central Oklahoma south into Mexico.

STATUS: Uncommon.

HABITAT: Inhabits dry shortgrass prairie, plowed and stubble fields, grazed pastures, dry lake beds, and other sparse, bare, dry grounds on the western plains.

SPECIAL HABITAT REQUIREMENTS: Open, dry, sparsely vegetated prairie.

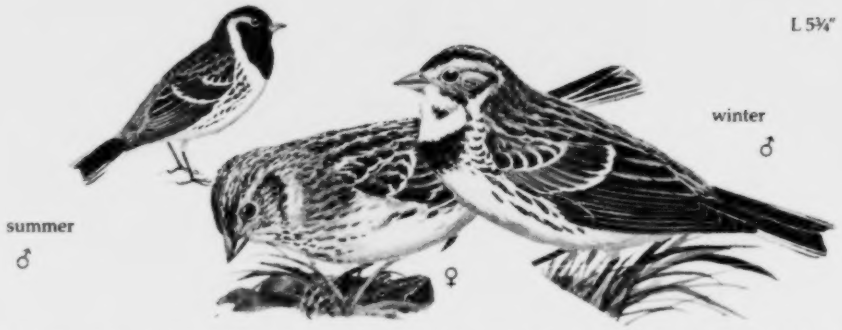
NEST: Places nest in a shallow depression on the ground, sometimes in a clump of grass or under a shrub, but usually amid sparse prairie vegetation. Typically builds a nest that is open above, covered only by a few blades of grass, although occasionally it may be concealed by overhanging shrub branches. Rarely, places nest above ground in a shrub.

FOOD: Forages on the ground, picking up seeds of weeds and grasses, and insects, especially grasshoppers.

REFERENCES: DuBois 1937, Johnsgard 1979, Kaufman in Farrand 1983c, Kraus in Bent 1968c, Mickey 1943.

Lapland Longspur

Calcarius lapponicus



RANGE: Breeds from western and northern Alaska and northern Yukon across northern Canada, including many islands to Labrador, and south to south-coastal Alaska and southern Keewatin. Winters from coastal southern Alaska and southern British Columbia across the northern United States to Nova Scotia, and south to southeastern California, Colorado, Arkansas, and Maryland; casually farther south.

STATUS: Abundant on breeding grounds; local in interior.

HABITAT: Breeds in arctic and subarctic tundra, preferring areas of wide, moist tundra covered with grassy tussocks or hummocks and interspersed with ponds and streams. Inhabits moist sedge meadows, swampy flats, marshes, and moist grasslands, preferring sedge tussocks or ridges covered with low willows, or dwarf birch intermixed with heath. Avoids extremely wet areas unless elevated sites are available. In winter, found in stubble fields, barren grounds, beaches, prairies, or open weedy meadows.

SPECIAL HABITAT REQUIREMENTS: Moist tundra on relatively level terrain with elevated sites such as tussocks, hummocks, or low ridges, and concealing vegetation.

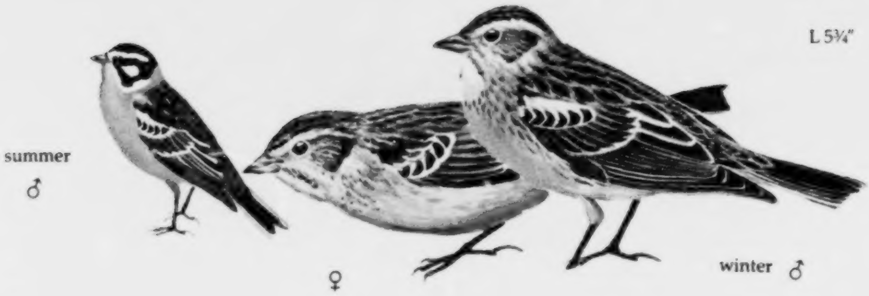
NEST: Usually places nest in a depression in the side of a small hummock or tussock, protected by overhanging grass, sedge, or leafy twigs of shrubs. Uses drier, elevated sites for nesting rather than low, wet, surrounding terrain.

FOOD: In summer, eats mostly insects and the seeds of a variety of plants; in winter, feeds mainly on seeds of weeds and grasses. Gleans food from the ground.

REFERENCES: DeGraff et al. 1980, Jehl 1968, Williamson in Bent 1968c.

Smith's Longspur

Calcarius pictus



RANGE: Breeds in east-central Alaska and adjacent British Columbia, and from northern Alaska east across northern Canada to extreme northern Ontario. Migrates through the northern Great Plains. Winters from Kansas and Iowa south to Oklahoma, Texas, and Louisiana.

STATUS: Uncommon.

HABITAT: Inhabits dry, grassy, hummock areas in tundra, often where there are dry sedge meadows dominated by dwarf birch and scattered black spruce. Prefers areas with a perch site, often using small spruces. Winters in grassy and weedy fields, prairies, and along edges of open areas such as airport runways and roadways.

SPECIAL HABITAT REQUIREMENTS: Small isolated trees in tundra areas for perches.

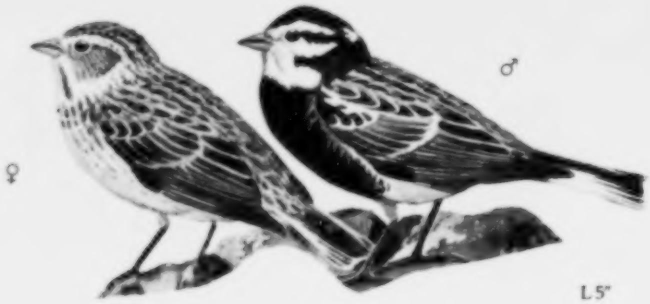
NEST: Builds a nest, commonly unprotected from above, in a small depression in a relatively dry, flat hummock, usually on a hummock ridge or at the base of a small tree or shrub.

FOOD: Eats a variety of foods during summer; largely plant material, principally seeds (90 percent in the first part of June.) Also eats invertebrates when available, including ants, spiders, and beetles. Commonly eats immature insects in the latter part of the summer.

REFERENCES: Jehl 1968.

Chestnut-collared Longspur

Calcarius ornatus



summer

RANGE: Breeds from southern Alberta, Saskatchewan, and Manitoba, east of the Rockies to northeastern Colorado and western Kansas. Winters from northern Arizona, central and northern New Mexico, eastern Colorado, and central Kansas south into Mexico. Occurs rarely in California.

STATUS: Common.

HABITAT: Inhabits shortgrass plains and prairies (cultivation has reduced breeding habitat.) In winter, tends to congregate on cultivated fields, and along edge areas, fencerows, and roadways.

SPECIAL HABITAT REQUIREMENTS: Shortgrass prairie.

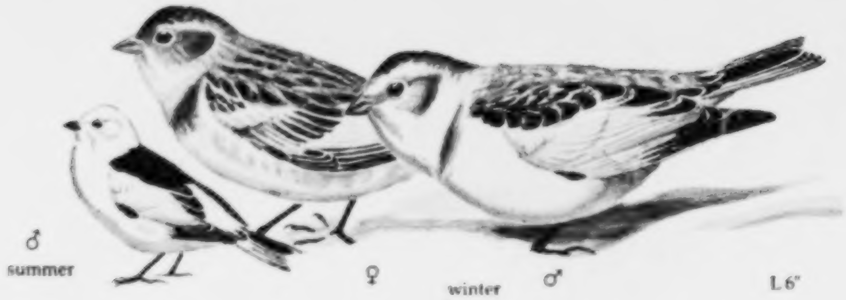
NEST: Builds nest on the ground, usually in a small depression in grass in uncultivated grassland with occasional low ridges and shallow areas. Seems to prefer nest sites in moist areas. In flooded meadows, places nest on an elevated site.

FOOD: Feeds primarily on grass seed and some insects, which are gleaned from the ground. During winter, feeds almost entirely on plant material.

REFERENCES: Forbush and May 1955.

Snow Bunting

Plectrophenax nivalis



RANGE: Breeds in Arctic tundra from northern Alaska to Prince Patrick and northern Ellesmere islands, south to extreme northwestern British Columbia, east-central Mackenzie, central and southeastern Keewatin, and northern Labrador. Winters from west-central and southern Alaska and southern Canada south to California, Colorado, Missouri, and North Carolina, casually farther south.

STATUS: Common.

HABITAT: Breeds in rough, rocky Arctic tundra with scattered vegetation. Prefers stony beaches, rocky escarpments, and cliffs, occurring less commonly in grassy tundra. In winter, inhabits open country, along lake shores, beaches, and roadsides, and grassy, weedy, or stubble fields.

SPECIAL HABITAT REQUIREMENTS: Rocky areas with sparse vegetation.

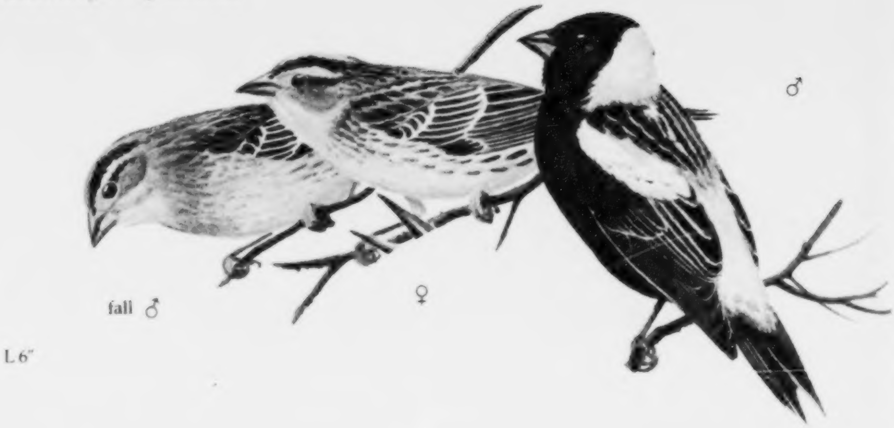
NEST: Nearly always places nest in a hole or cranny, in a variety of natural and artificial sites, often a foot or more back in narrow rock crevices under loose rocks on the ground. May place nest in a depression or in cracks in the ground if other sites are lacking but rarely exposed on open ground.

FOOD: In winter, primarily eats seeds of weeds and grasses gleaned from the tips of plants and the surface of the snow. Adds insects and spiders to the diet during summer.

REFERENCES: DeGraff et al. 1980. Forbush and May 1955, Parmelee in Bent 1968c, Sutton and Parmelee 1954b.

Bobolink

Dolichonyx oryzivorus



RANGE: Breeds from southern interior British Columbia across southern Canada and central Ontario south to eastern Oregon, central Colorado, central Illinois, and central New Jersey. Winters in South America.

STATUS: Locally common, although numbers are decreasing in the Northeast due to a decline in agriculture; extending range in the West because of irrigation.

HABITAT: Prefers large open fields of tall grass, alfalfa, clover, or grain crops, but also inhabits wet meadows, ungrazed to lightly grazed mixed-grass prairies, and fallow fields. During migration, frequents marshes and grain fields.

SPECIAL HABITAT REQUIREMENTS: Large expanses of grassland or forb cover.

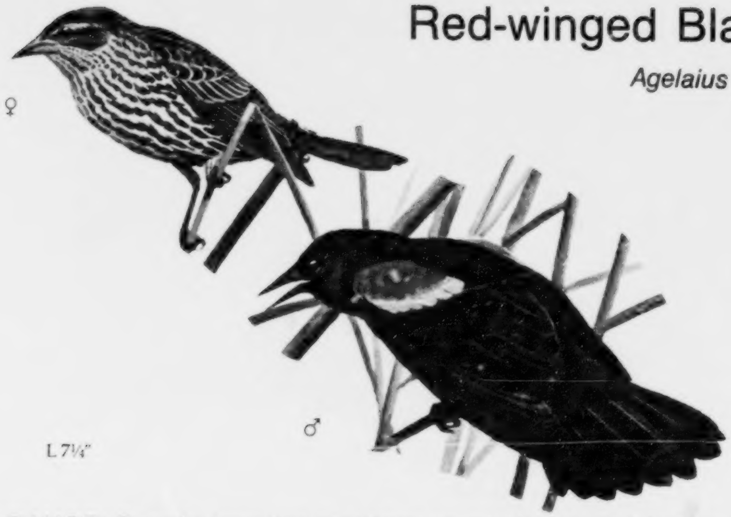
NEST: Builds nest on the ground, usually in a hollow scraped in the ground or in a natural depression, rarely above ground attached to plant stems. Always locates nest in dense stands of tall vegetation such as hay, alfalfa, clover, or thick growths of weeds.

FOOD: Prefers to forage in cultivated grain fields, gleaning insects, seeds of weeds and grasses, and waste grain from standing vegetation and on the ground.

REFERENCES: Beal 1900, Bent 1958, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979.

Red-winged Blackbird

Agelaius phoeniceus



RANGE: Breeds from the southern tip of Alaska, and Yukon down to northern Washington, across the northern part of the United States and Canada including Idaho, Montana, Wyoming, the Great Lakes, and New England. Resident in the rest of the United States south into Baja Califonia, Mexico, and Central America. Northern birds migrate southward in winter.

STATUS: Abundant.

HABITAT: Breeds in marshes and agricultural areas, usually where there are wetlands and also along the edge of hayfields, old fields, and pastures. Prefers areas with trees nearby and where habitat edges are abundant; often perches on old erect vegetation. Is extremely territorial, partitioning territories into areas of several hundred square feet, thus efficiently limiting the numbers that can exploit a resource. Flocks in the winter and moves throughout fields and marshy areas.

SPECIAL HABITAT REQUIREMENTS: Standing vegetation along open fields and marshes.

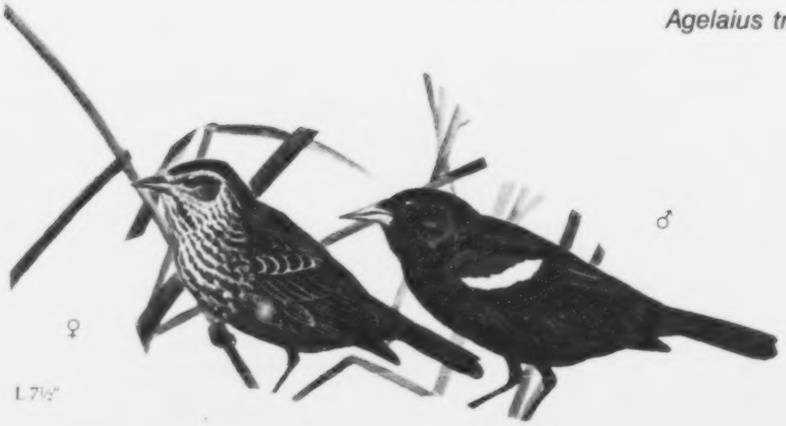
NEST: Nests in a deep narrow cup of grass, reeds, and weed rootlets, usually attached to emergent vegetation (particularly cattails) up to 12 feet above ground. Also nests in weeds and brush patches, croplands such as alfalfa and cereal grains, even upland areas of mixed chaparral.

FOOD: Consumes a diet consisting of both vegetable and animal material, including a variety of grains and seeds, insects, spiders, mites, and snails. Often descends in large numbers on cultivated fields, eating a great deal of the grain.

REFERENCES: Albers 1978, Beal 1900, Case and Hewitt 1963, Lowe and Mansell 1983, Mott et al. 1972, Orians 1961, Payne 1969.

Tricolored Blackbird

Agelaius tricolor



RANGE: Breeds from southern Oregon east of the coast range south through interior California along the Pacific Coast from central California to northwest Baja California. Resident from northern California south throughout breeding range and adjacent agricultural areas. Some northern birds are migratory.

STATUS: Common.

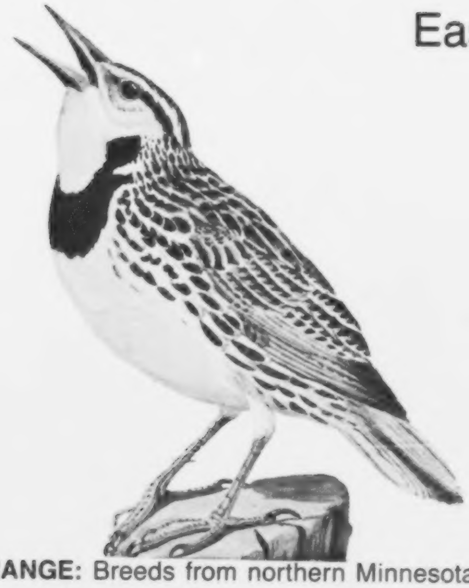
HABITAT: Commonly breeds in freshwater marshes of cattail, tule, bulrush, and sage. Roosts in the strips along marshes between rice fields. Feeds and roosts in dense flocks, ranging from 4 to over 20,000 in a colony, throughout the year. In winter, moves through marshes, open cultivated lands, and pastures.

SPECIAL HABITAT REQUIREMENTS: Cattail or tule marshes.

NEST: Builds nest of cattails, sedges, grasses, or other aquatic vegetation gathered from the surface or in shallow water, and attached to cattails or twigs in shrubs and blackberry thickets, usually near water. Prefers live emergent vegetation for nesting.

FOOD: Gleans food from the ground and low vegetation; eats insects, spiders, and occasionally small tadpoles and snails. In winter, eats rice and a variety of grain crops.

REFERENCES: Payne 1969.



Eastern Meadowlark

Sturnella magna

L 8½"

RANGE: Breeds from northern Minnesota and southern Ontario across to southern New Brunswick, south through the Eastern United States to Texas, the Gulf Coast, Central America, and Florida, and west to southwestern South Dakota, central Nebraska and central Arizona. Winters from central Arizona, Kansas, central Wisconsin, New England, and Nova Scotia south throughout the breeding range, although casually farther north.

STATUS: Common, although there are widespread declines in the Eastern States.

HABITAT: Prefers pastures, but also occurs in other grass-dominated habitats such as hayfields, grassy meadows, tallgrass prairies, open fields of corn, alfalfa, and clover, and weedy orchards. Prefers moist meadows and lowlands at the western edge of its range, where distribution overlaps that of the western meadowlark.

SPECIAL HABITAT REQUIREMENTS: Open grasslands with elevated singing perches such as fences, poles, or lone trees.

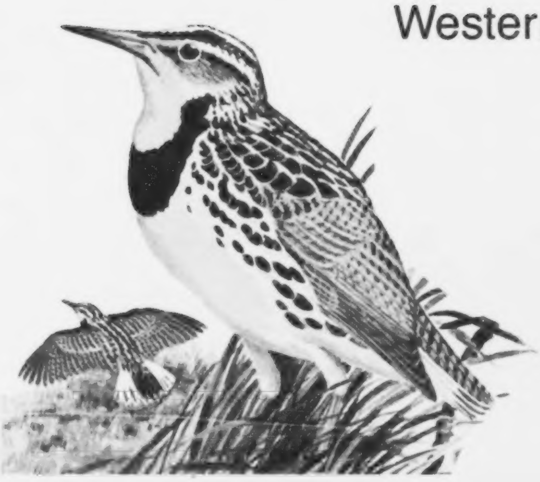
NEST: Builds nest on the ground in a natural depression or scrape, well concealed by a canopy of vegetation bent over the nest, preferably in cover 10 to 20 inches high.

FOOD: Gleans food from the ground and low vegetation. During summer, mainly eats insects; in winter, primarily eats seeds of weeds and grasses, and waste grain, except in southerly states where insects are still available.

REFERENCES: Bent 1958, Johnsgard 1979, Lanyon 1957, Roseberry and Klimstra 1970, Tate and Tate 1982.

Western Meadowlark

Sturnella neglecta



L 8½"

RANGE: Breeds from central British Columbia, north-central Alberta, Saskatchewan, and central Canada, south throughout most of the Western United States. Found in most areas west of the Mississippi. Resident throughout the Pacific, southern Rocky Mountain, and southern Great Plain States. Winters also in Oklahoma, Texas, and along the coasts of Mexico and Baja California.

STATUS: Common.

HABITAT: Typically inhabits grasslands, savannahs, cultivated fields, and pastures, preferring open fields with perch sites such as fences, old logs, or dead trees.

SPECIAL HABITAT REQUIREMENTS: Open grasslands.

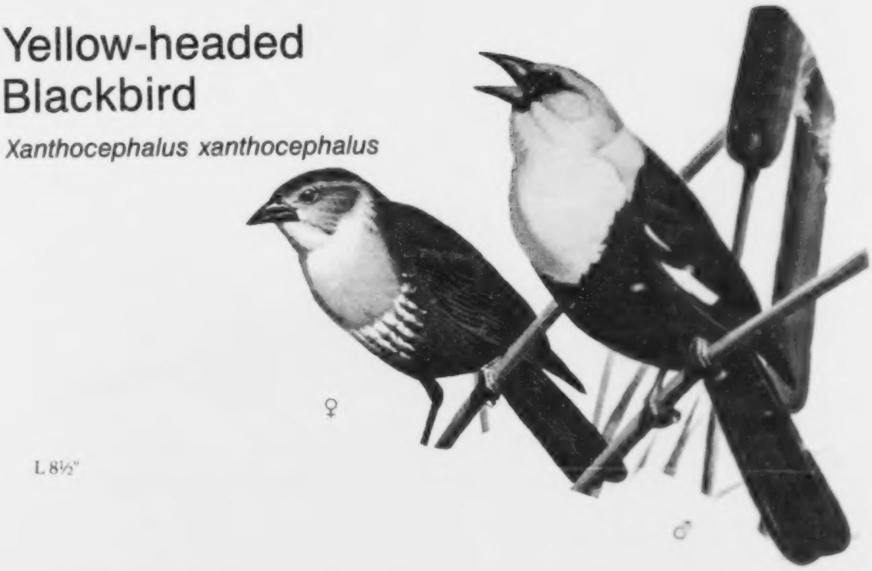
NEST: Builds nest in a shallow depression on dry ground in open grassland, often in grass or a small grass tuft, sometimes in rocky areas. Usually uses grasses for nest material.

FOOD: Gleans food from the ground or low vegetation. Eats both animal and vegetable material; about 70 percent animal material, mainly beetles, but also a variety of other insects and invertebrates; and a variety of grains and seeds.

REFERENCES: Lanyon 1957.

Yellow-headed Blackbird

Xanthocephalus xanthocephalus



RANGE: Breeds from southern and central Canada, throughout the western part of the United States, west of the Mississippi River. Winters from southern California, Arizona, New Mexico, and Texas into Mexico.

STATUS: Common.

HABITAT: Inhabits freshwater marshes of cattails, bulrushes, and reeds, generally over water. Winters in open cultivated fields, pastures, and marshes.

SPECIAL HABITAT REQUIREMENTS: Marshy vegetation.

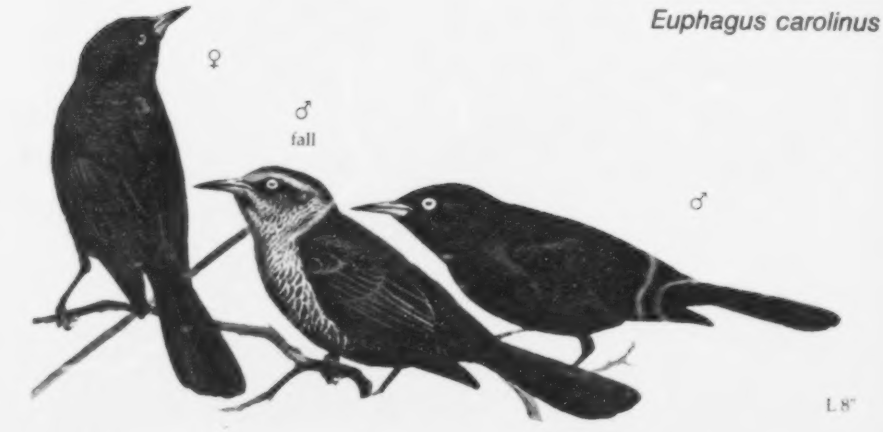
NEST: Generally nests in colonies. Builds a woven basketlike cup nest of marsh vegetation lined with fine grass and attaches it to reeds and cattails 1 to 3 feet above water or sometimes in willows in wet areas.

FOOD: Eats both vegetable and animal material gleaned from the ground, mostly vegetative material, which includes seeds and leaves of grasses and forbs, and grain crops.

REFERENCES: Beal 1900, Forbush and May 1955, Lowe and Mansell 1983, Willson 1966.

Rusty Blackbird

Euphagus carolinus



RANGE: Breeds from western and north-central Alaska and northern Yukon to southern Keewatin, northern Quebec and central Labrador south to southwestern and south-coastal Alaska, central interior British Columbia, central Manitoba, northern New England, and northeastern New York. Winters from south-coastal Alaska and southeastern British Columbia to southern Ontario and southern New England south to Texas, the Gulf Coast, and northern Florida, and west to central Colorado.

STATUS: Fairly common.

HABITAT: Almost always found near water, breeding in boggy spruce woods, along swampy wooded shores of lakes, streams, tree-bordered marshes, beaver ponds, and swamps; and on wooded islands in lakes. Rarely occurs in fields with other blackbirds. In winter, does not stay so close to water, occurring also in open woodland, scrub, pastures, weedy gardens, and cultivated land.

SPECIAL HABITAT REQUIREMENTS: Wooded wetlands during the breeding season.

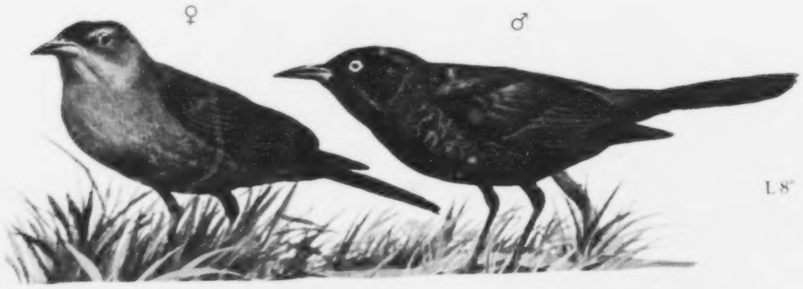
NEST: Nests in dense growths of evergreens, especially second-growth spruce or balsam, 2 to 20 feet, but typically less than 10 feet above the ground. Also uses dead trees or clumps of deciduous bushes such as buttonbush or sweetgale along streamsides for nesting.

FOOD: Forages by gleaning insects, weed seeds, waste grain, and wild fruit from the ground in pastures, fields, or grassy edges of wetlands, or by wading in shallow water.

REFERENCES: Beal 1900, Bent 1958, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Kaufman in Farrand 1983c, Kennard 1920.

Brewer's Blackbird

Euphagus cyanocephalus



RANGE: Breeds from southwestern and central British Columbia to southern Ontario, south throughout the northern United States; resident in the Pacific Coast, Great Plains, and Rocky Mountain states. Winters from southern British Columbia, east-central Montana, and the northern portions of the Gulf States, south to Baja California, northern Mexico, southern Texas, the Gulf Coast, and Florida.

STATUS: Common.

HABITAT: Prefers to be near water in habitats such as riparian woodlands, aspen groves, parklands, cultivated lands, and marshes; often found around human habitation. Uses bulrushes and pines for roosting and daytime resting places and displays from the tops of pine trees. In winter, frequents pastures and fields.

SPECIAL HABITAT REQUIREMENTS: Marshlike areas.

NEST: Nests singly or in loose colonies on the ground or in trees and shrubs 20 to 30 feet above the ground. Places the cup-shaped nest usually at or near the end of a branch.

FOOD: Consumes a diet of about 68 percent vegetative and 32 percent animal material gleaned mostly from the ground. Commonly follows plows searching for insects.

REFERENCES: Beal 1900, Terres 1980, Williams 1952.

Great-tailed Grackle

Quiscalus mexicanus

RANGE: Resident from southern California, southern Nevada, southeastern Colorado, Kansas, and southwestern Missouri south through Mexico to South America.

STATUS: Common.

HABITAT: Inhabits a variety of climatic regions and uses a diversity of plant types for nesting. Basically needs standing water and open ground for foraging; does not occur in forests or at great distances from water. In deserts and prairie country, only occurs near water courses or irrigated agricultural areas where trees are available.

SPECIAL HABITAT REQUIREMENTS: Partially open situations with scattered trees and water.

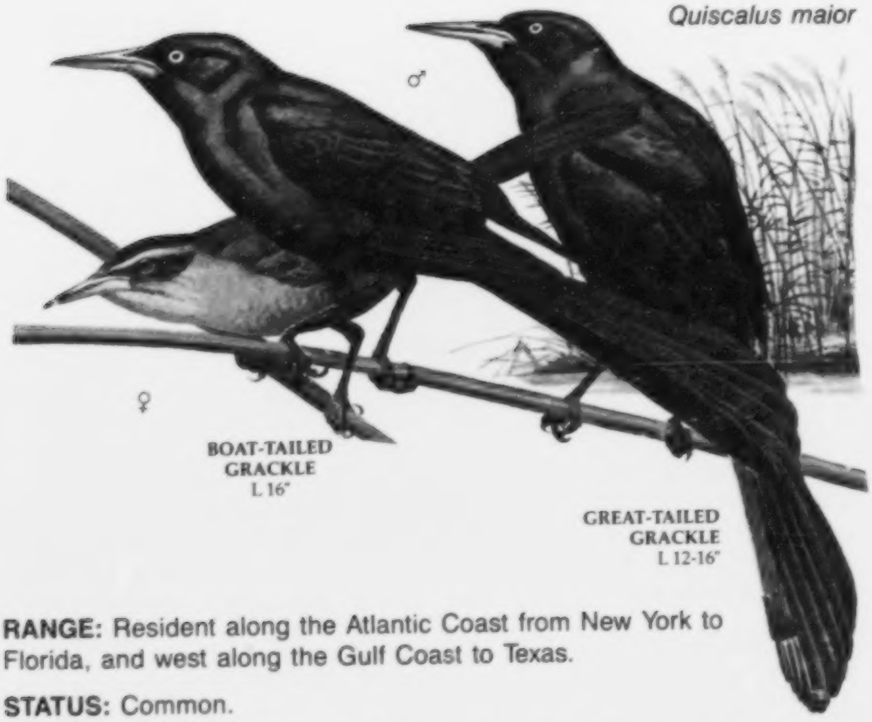
NEST: Nests colonially; builds a bulky cup nest of grass, sticks, and seaweed or Spanish moss that is lined with grass and rootlets. Locates nest 2 to 60 feet above ground in a variety of tree species or may build it in reeds over water when trees are unavailable.

FOOD: Gleans its food from the ground, occasionally wading in shallow water. Eats grains, berries, mollusks, crustaceans, insects, small fish, young birds, and eggs.

REFERENCES: Lowe and Mansell 1983, Pruitt 1975, Selander and Giller 1961.

Boat-tailed Grackle

Quiscalus maior



RANGE: Resident along the Atlantic Coast from New York to Florida, and west along the Gulf Coast to Texas.

STATUS: Common.

HABITAT: Prefers open coastal marshes near large bodies of brackish or salt water, but also inhabits large tidal rivers short distances inland, city parks, and farmland. In Florida, inhabits inland freshwater habitats on the peninsula as well as coastal marshes. Seldom occurs more than a few miles inland.

SPECIAL HABITAT REQUIREMENTS: Coastal fresh or saltwater wetlands.

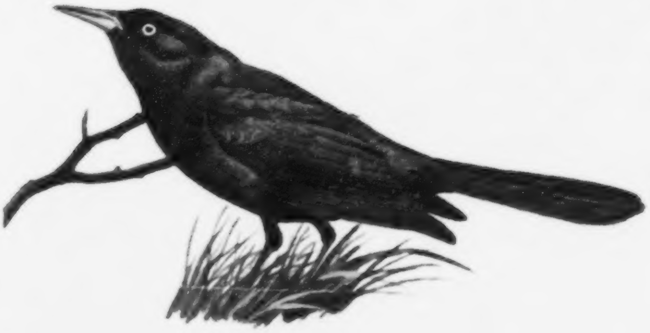
NEST: Nests in colonies in cattails, bulrushes, marsh-grass, bushes, or trees, from 6 inches to 80 feet above the ground. Usually builds nest in vegetation growing in water or in branches hanging over water Prefers to nest in marsh vegetation, often selecting marsh habitat over trees near water.

FOOD: Finds most of its food on the ground by probing in mud and litter or turning over shells or stones. Commomly forages in marshy areas, mudflats, and the margins of ponds, lakes, and streams. Eats insects, fish, frogs, crayfish, mollusks, young birds and eggs, rice, waste grains, and berries.

REFERENCES: Beal 1900, Low and Mansell 1983, McIlhenny 1937, Pruitt 1975, Selander and Giller 1961, Tutor 1962.

Common Grackle

Quiscalus quiscula



L 10-12"

RANGE: Breeds from northeastern British Columbia and southern Mackenzie to southwestern Newfoundland, south to central and southeastern Texas, the Gulf Coast and southern Florida, and west to eastern Wyoming, central Colorado, and central and southeastern New Mexico. Winters from Kansas, Iowa, the southern Great Lakes region, New England, and Nova Scotia south to southeastern New Mexico, southern Texas, the Gulf Coast, and Florida.

STATUS: Abundant.

HABITAT: Prefers open habitat (especially agricultural) with scattered trees or open woodlands, forest edge, and nearby human habitation. Frequents city parks, swamps, brushy or reedy marshes, and cultivated lands, especially in migration.

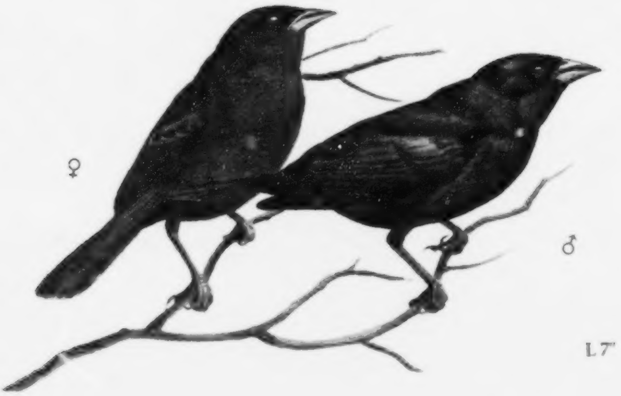
NEST: Builds nest in a variety of trees and often has local preferences for tree species. Nests colonially, building nests 7 to 35 feet above the ground (average 20 feet); most are well concealed in dense masses of foliage.

FOOD: Forages for food in cultivated fields, shrubs, and shallow water. Eats nuts, weed seeds, small bulbs, eggs and young of other birds, and fish; can be a pest when large numbers descend on cultivated crops.

REFERENCES: Beal 1900, Forbush and May 1955, Jones 1969, Maxwell 1970.

Bronzed Cowbird

Molothrus aeneus



RANGE: Resident from extreme southeastern California, southern Arizona, New Mexico, and Texas south through central Mexico to Panama.

STATUS: Locally common.

HABITAT: Inhabits mostly open country with occasional tree patches or large tall shrubs. Prefers humid, hot climate, often in areas where cattle are grazed and is common in areas of human habitation.

SPECIAL HABITAT REQUIREMENTS: Open areas with scattered trees or shrubs.

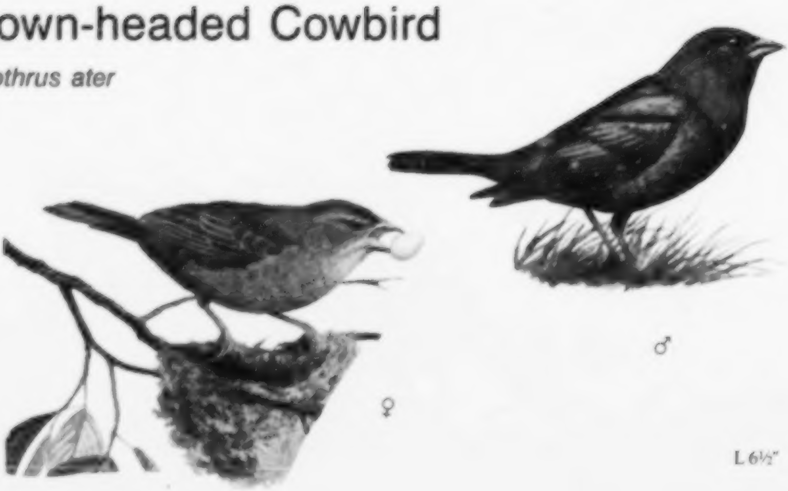
NEST: Builds no nest; generally lays its eggs in the nests of other birds, preferably those nesting in brush, semi-open to open ranch, farm, and residential areas.

FOOD: Eats weed and grass seeds, grain, and insects that are gleaned from the ground. Also eats insects from the skin of livestock. Commonly feeds and roosts in large flocks.

REFERENCES: Oberholser 1974b.

Brown-headed Cowbird

Molothrus ater



RANGE: Breeds from southeastern Alaska, northern British Columbia, and southern Mackenzie east to southern Quebec and southern Newfoundland, and south to Mexico, the Gulf Coast, and central Florida. Winters from northern California, central Arizona, the Great Lakes region, and New England south to Mexico, the Gulf Coast, and southern Florida.

STATUS: Common.

HABITAT: Prefers habitats where low or scattered trees are interspersed with grassland vegetation. Originally occupied open grasslands and avoided unbroken forestlands, but due to agriculture, cattle grazing, and deforestation, occupies a much expanded range. Now found in open coniferous and deciduous woodlands, forest edges, brushy thickets, agricultural land, and suburban areas.

SPECIAL HABITAT REQUIREMENTS: Habitats with open grassy spaces.

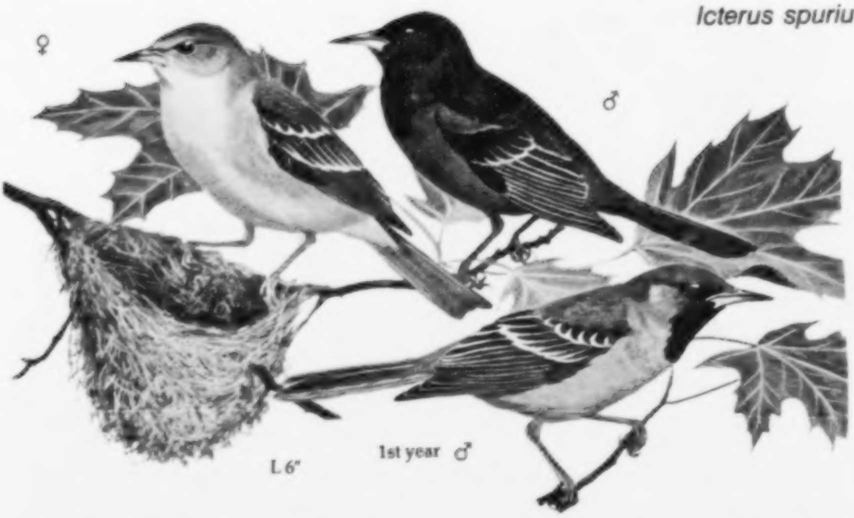
NEST: Builds no nest; lays its eggs in the nests of over 100 species of birds, particularly tyrant flycatchers, finches, vireos, and warblers.

FOOD: Gleans weed seeds, which form over half of the diet, as well as grass seeds, waste grain, and insects from the ground. Commonly forages in pastures searching for insects stirred up by cattle.

REFERENCES: Beal 1900, Bent 1958, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Mayfield 1965.

Orchard Oriole

Icterus spurius



RANGE: Breeds from southeastern Saskatchewan, southern Manitoba, and central Minnesota east to northern Massachusetts, south to Mexico, Texas, the Gulf Coast and central Florida, and west to eastern Colorado. Winters from Mexico to South America, casually to southern Texas, rarely in coastal California.

STATUS: Locally common, but populations are decreasing from Kansas to Alabama.

HABITAT: Prefers orchards and open country with a few scattered trees. Also breeds in residential areas, farmlands, shelterbelts, woodland margins, and lightly wooded river bottoms. At times, it may inhabit marshes and bordering trees. Heavily wooded or dense forests are avoided.

SPECIAL HABITAT REQUIREMENTS: Open woodlands or open areas with scattered trees.

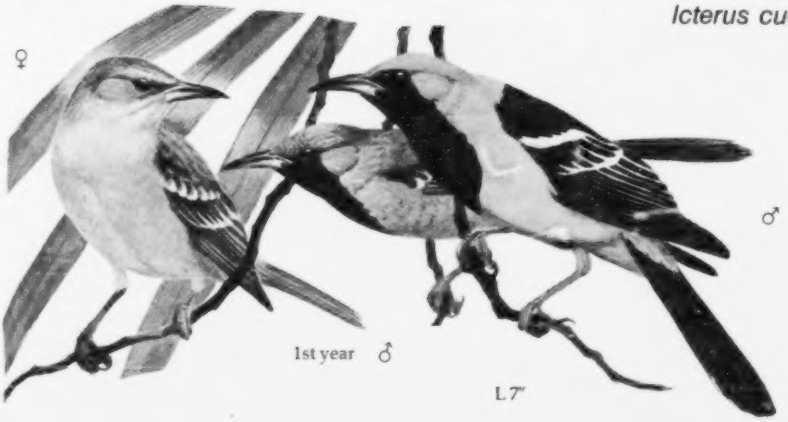
NEST: Suspends semipendulous nest, well concealed by dense foliage, from a fork or crotch of a variety of trees and shrubs 4 to 70 feet, typically 10 to 20 feet, above the ground. Commonly nests in trees also supporting Eastern kingbird nests.

FOOD: Gleans insects, which form over 90 percent of the diet, from leaves of trees and shrubs. Also eats fruits.

REFERENCES: Bent 1958, DeGraff et al. 1980, Dennis 1948, Forbush and May 1955, Johnsgard 1979, Tate and Tate 1982.

Hooded Oriole

Icterus cucullatus



RANGE: Breeds from northern coastal and central California, southern Nevada, central Arizona, and western Texas south into northern Mexico. Resident in southern Baja California and throughout mainland Mexico.

STATUS: Common.

HABITAT: Inhabits palm trees, mesquite, dry shrubs, and some deciduous and riparian woodlands; often found around ranches and towns.

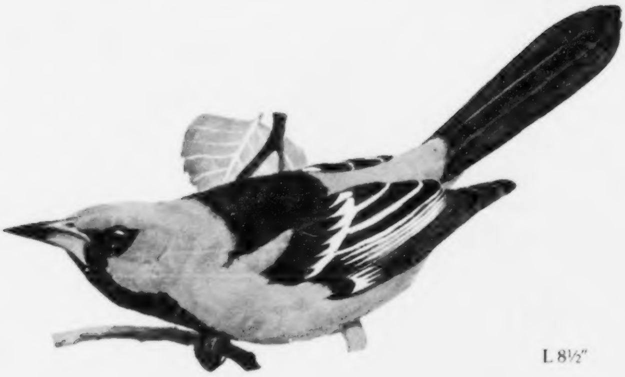
NEST: Usually constructs a large, hanging nest with a variety of grasses, Spanish moss, thin branches, as well as dry vegetables, hair, and other local materials woven together, and suspends it from the limbs of trees or cacti.

FOOD: Eats a variety of insects, along with flower nectar, fruit, and other plant materials.

REFERENCES: Phillips et al. 1964, Terres 1980.

Altamira Oriole

Icterus gularis



L 8½"

RANGE: Resident from the lower Rio Grande Valley in extreme southern Texas south through Mexico to Central America.

STATUS: Rare.

HABITAT: Inhabits open woodlands, trees along fields and streams, scattered groves in pastures, and hillsides.

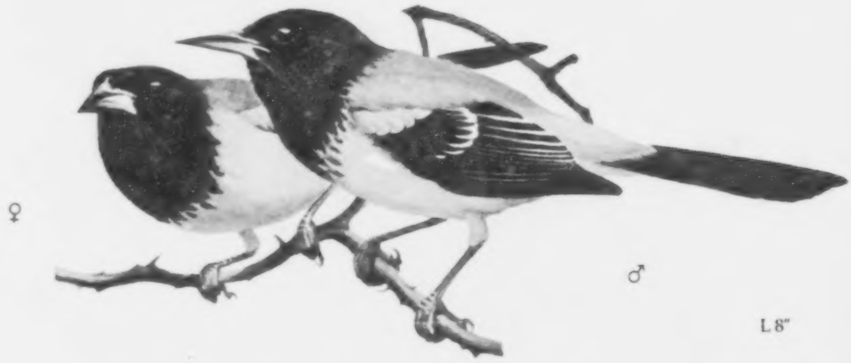
NEST: Fastens conspicous pensile pouch nest, 1 to 2 feet long, to the ends of slender, strong, flexible terminal twigs, 12 to 35 feet above the ground. Usually places nest in ebony blackbead, mesquite, or willow.

FOOD: Forages among the leaves of trees for insects and fruits; also eats caterpillars, spiders, small figs, and berries.

REFERENCES: Bent 1958, Oberholser 1974b, Sutton and Pettingill 1943, Terres 1980.

Audubon's Oriole

Icterus graduacauda



RANGE: Resident in southern Texas and Mexico.

STATUS: Uncommon.

HABITAT: Inhabits dense forests along stagnant water courses or old stream beds, occurring in mesquite, hackberry, ebony blackbead, or huisache with a thick undergrowth of shrubs or small trees. Also frequents thickets in forest openings.

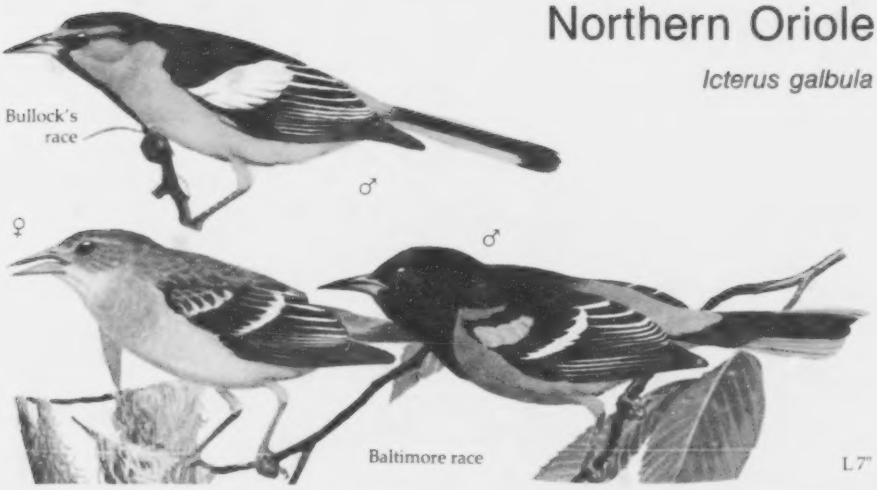
NEST: Attaches half-pensile nest to upright terminal branches, twigs, and leaves 6 to 14 feet above the ground. Places nest in dense cover, usually mesquite.

FOOD: Forages at midlevel in trees in dense woods for insects and small fruits.

REFERENCES: Bent 1958, Kaufman in Farrand 1983c, Oberholser 1974b.

Northern Oriole

Icterus galbula



RANGE: Breeds from southern interior British Columbia and central Alberta to central Maine and central Nova Scotia, south to southern Texas, Mexico, the central Gulf States, central North Carolina, and Delaware. Winters along the Gulf Coast and from Mexico to South America.

STATUS: Common.

HABITAT: In the East, inhabits orchards, deciduous forest edges, wooded river bottoms, upland forests, partially wooded suburban areas, parks, and shelterbelts. In the west, prefers semiarid mesquite groves and deciduous trees bordering streams or irrigation ditches in open country, prairie, or cultivated areas.

SPECIAL HABITAT REQUIREMENTS: Tall deciduous trees for nesting.

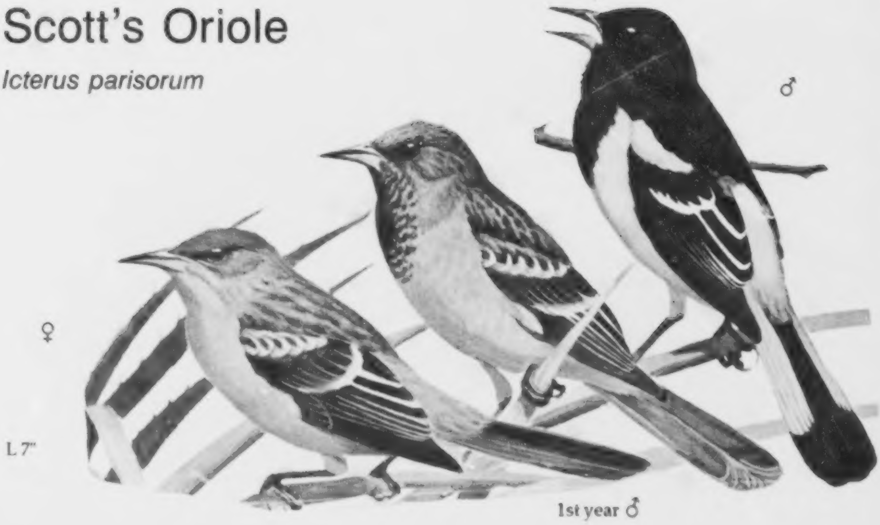
NEST: Usually attaches pendant nest by its rim to the tip of a long drooping branch, 9 to 70 feet, but typically 25 to 30 feet above the ground. Most frequently uses large trees, especially elms and cottonwoods growing in the open, but will use a wide variety of deciduous trees throughout its range.

FOOD: Primarily gleans insects from leaf and twig surfaces; also eats a few spiders and some wild and cultivated fruit.

REFERENCES: Bent 1958, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Typer in Bent 1958.

Scott's Oriole

Icterus parisorum



RANGE: Breeds from southern California, Nevada, Utah, western Colorado, central New Mexico, and western Texas south into Mexico. Winters from southern California to southern Mexico.

STATUS: Common.

HABITAT: Prefers pinyon-juniper woodlands of montane semidesert areas, live oak-yucca associations, and sycamores and cottonwoods in canyons. Also uses joshua-tree habitat.

SPECIAL HABITAT REQUIREMENTS: Yucca, pinyon-juniper, or oak trees in arid areas.

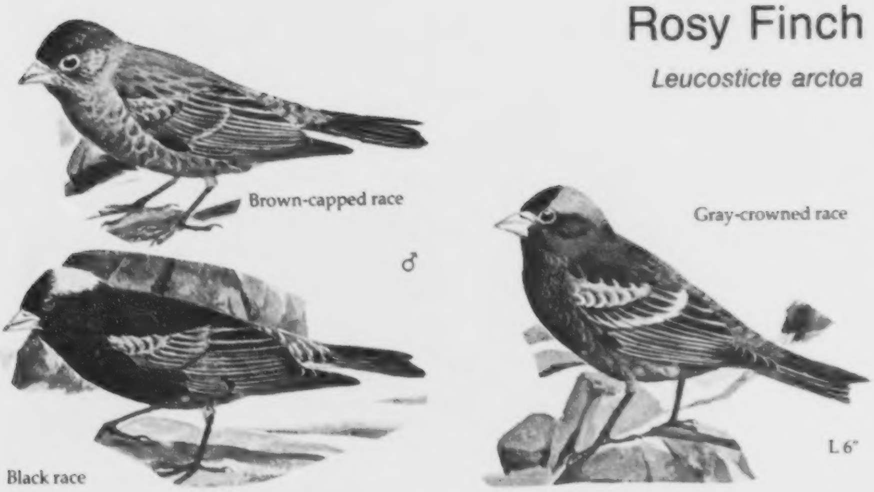
NEST: Constructs a cup-shaped nest with fibers of local grasses, weeds, and other vegetative material and suspends it from branches of almost any available tree, including joshua-trees and yucca plants.

FOOD: Probes flowers for nectar and small insects; also eats other insects, berries, and cactus fruits.

REFERENCES: Phillips et al. 1964, Terres 1980.

Rosy Finch

Leucosticte arctoa



RANGE: Breeds above timberline from Alaska to southwestern Alberta and south through the Cascades, Sierra Nevada, and the Rocky Mountains to east-central California, central Utah, and north-central New Mexico. In winter, descends to lower elevations (4,000 to 7,000 feet) but remains in the same general geographic area.

STATUS: Common.

HABITAT: Prefers barren, rocky or grassy areas and cliffs among glaciers or above timberline for breeding habitat. In winter, descends to lower elevation open habitat such as fields, cultivated lands, brushy areas, and areas of human habitation.

SPECIAL HABITAT REQUIREMENTS: Talus or cliffs for nesting.

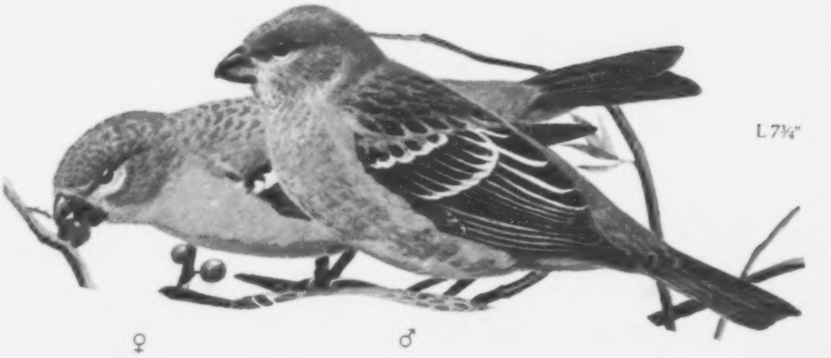
NEST: Nests in the cracks or holes of cliffs that offer protection. Builds a bulky nest of grasses and dry stalks of various herbaceous materials, lining it with fine grass and feathers.

FOOD: Consumes a diet that consists of vegetable material (more than 75 percent), mainly small seeds of alpine plants. Occasionally eats leaves and fruiting capsules and also consumes insects that are frozen in snow, as well as small insects found on the ground or in vegetation.

REFERENCES: French 1959, Johnson 1965.

Pine Grosbeak

Pinicola enucleator



RANGE: Breeds from western and central Alaska and northern Yukon east to northern Quebec and northern Labrador, south to central California and northern New Mexico, and, east of the Rockies, to northern Alberta, southern Ontario, and central Maine. Winters from central Alaska and southern Mackenzie east to Labrador and south throughout the breeding range; in invasion years occurs farther south.

STATUS: Locally common.

HABITAT: Inhabits coniferous forests near timberline in the western mountains, and northern spruce-fir forests up to treeline in Canada and Alaska. Also occurs in spruce stands bordering bogs, barren areas with clumps of dwarf spruce and tamarack, and mixed coniferous and deciduous woodlands. Prefers stands with large trees and low to intermediate canopy cover, usually near the edge of an open area or along a forest border.

SPECIAL HABITAT REQUIREMENTS: Coniferous forest of spruce-fir or pine.

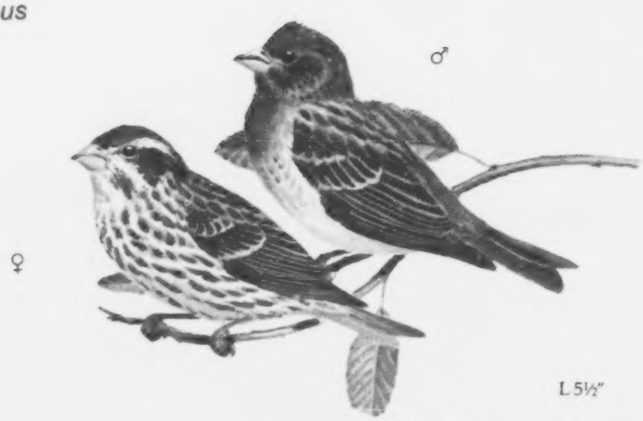
NEST: Constructs nest in thick foliage near the end of a horizontal bough in conifers, often spruce, sometimes in underbrush. May place nest low in a conifer or up to 35 feet above the ground.

FOOD: Primarily eats buds and seeds of a variety of coniferous and deciduous trees, picked and gleaned from trees or from the ground. Also forages on some spiders and insects in spring and summer.

REFERENCES: Bent 1968a, Blake in Bent 1968a, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979, Taber in Bent 1968a, Verner and Boss 1980.

Purple Finch

Carpodacus purpureus



RANGE: Breeds from northern British Columbia, southern Yukon, and northern and central Alberta east to central Ontario and Newfoundland south to Baja California, and, east of the Great Plains, to central Minnesota, northern Ohio, West Virginia, and southeastern New York. Winters from southwestern British Columbia south to Baja California, and from southern Manitoba east to Newfoundland, south to Texas, the Gulf Coast, and Florida.

STATUS: Common.

HABITAT: Generally inhabits coniferous forest edge, open mixed woodlands, and evergreen plantations. Also occurs in conifers in parks and residential areas. In winter, commonly congregates around houses with feeding stations, roosting in dense evergreens or thickets.

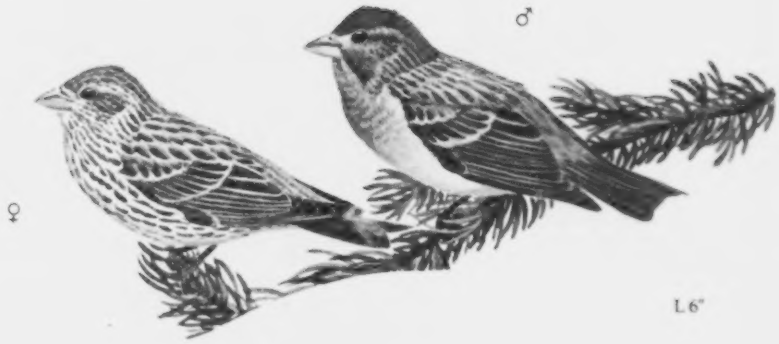
NEST: In the East, places nest on a horizontal branch of a conifer, especially spruce, but occasionally in a deciduous tree or shrub. In the West, commonly nests in both deciduous and coniferous trees, preferably near water. Often locates nest near tree tops, up to 40 feet above the ground.

FOOD: During winter and spring, primarily eats seeds, while in late spring and summer adds insects and wild and cultivated fruits to diet. Gleans much of its food from the branches of trees and shrubs.

REFERENCES: Bent 1968a, DeGraff et al. 1980, Forbush and May 1955, Johnsgard 1979.

Cassin's Finch

Carpodacus cassinii



RANGE: Resident in western United States, in the mountains of the Pacific States, Idaho, and Montana, south into New Mexico and Arizona. Extends into Canada to breed, south into Mexico in winter.

STATUS: Common in western conifers.

HABITAT: Inhabits conifer forests, up to lodgepole pine type, with low to intermediate canopy cover; frequents forest edges more than interiors. In winter, moves to shrubby, bushy areas, as well as open areas with scattered trees.

SPECIAL HABITAT REQUIREMENTS: Conifer forests.

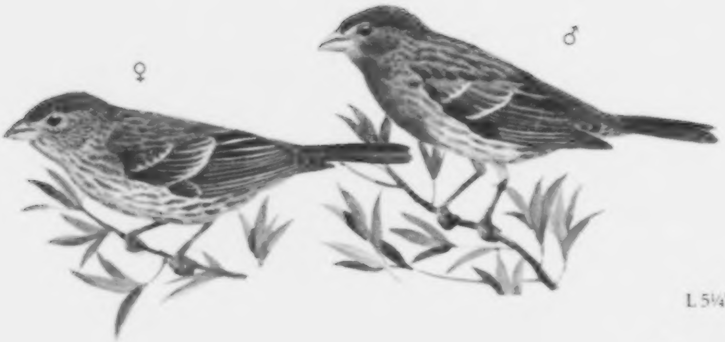
NEST: Nests in large conifers, near the ends of limbs quite high above the ground. Usually constructs nest of twigs, wood stems, rootlets, and lichen, and lined with hair and rootlets and sometimes bark.

FOOD: Primarily eats vegetable material, preferring buds, berries, and seeds, particularly those of conifers. Also eats some animal material, but only incidentally.

REFERENCES: Samson 1976, Verner and Boss 1980.

House Finch

Carpodacus mexicanus



RANGE: Breeds in disjunct distribution throughout most of the western United States, south into Texas and Mexico and in the northeastern part of the United States, north of the Carolinas, into New England. Winters throughout the breeding range in the west and south into the Appalachian Mountains.

STATUS: Abundant. Expanding range in the East.

HABITAT: Inhabits rural, suburban, and urban yards, parks, farms, and open woodlands, as well as wooded areas with large openings, chaparral, and arid shrublands.

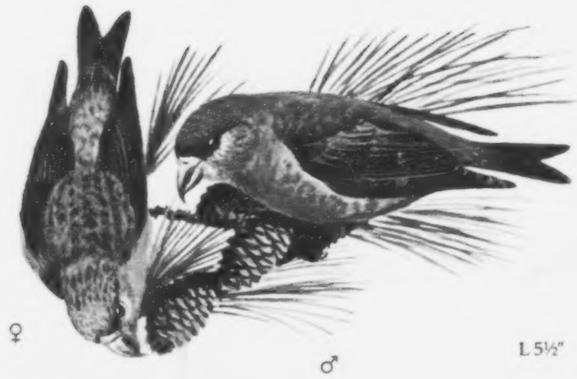
NEST: Builds nests in a variety of sites, including tree cavities, and in dense outer foliage of trees and shrubs. In the East, generally chooses conifers, locating nest about 20 feet above the ground. Usually constructs nest with a variety of local grass and other available vegetation.

FOOD: Forages on the ground for a variety of vegetative material, including seeds and fruits. Also forages in domestic fruit trees, sometimes doing considerable damage. Consumes widely varing kinds of foods, depending on local availability; includes some insects.

REFERENCES: DeGraff et al. 1980, Evenden 1957, Terres 1980.

Red Crossbill

Loxia curvirostra



RANGE: Resident from southern Alaska to Newfoundland, through southern Canada, and south to the northern Great Lakes area. Also from the Pacific states over to the Rocky Mountains, south into parts of Mexico. Wanders irregularly during the nonbreeding season.

STATUS: Locally common in conifer forests.

HABITAT: Inhabits coniferous and mixed coniferous-deciduous forests, humid pine-oak associations, and lowland pine savannah. Prefers forests with low canopy cover and is highly nomadic in response to changes in conifer seed production.

SPECIAL HABITAT REQUIREMENTS: Conifer forests with abundant seed production.

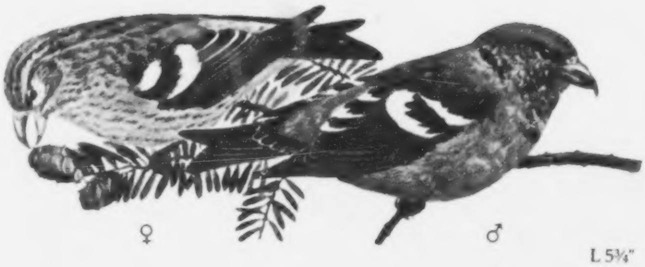
NEST: Builds saddled nest well out on a branch or in a cluster of conifer leaves 5 to 80 feet above the ground. Nests during all months when suitable seed crops are available, but mostly from February through June.

FOOD: Feeds primarily on seeds of conifer trees, plus seeds of deciduous trees in summer. Also eats insects during spring and summer.

REFERENCES: Forbush and May 1955, Griscom 1937, Snyder 1954.

White-winged Crossbill

Loxia leucoptera



RANGE: Resident from northeastern Alaska, south to the Pacific Northwest, throughout most of southern Canada, the eastern coast of Canada, and northern New England.

STATUS: Irregular.

HABITAT: Inhabits boreal forests, leaving them only when food is scarce.

SPECIAL HABITAT REQUIREMENTS: Conifer forests.

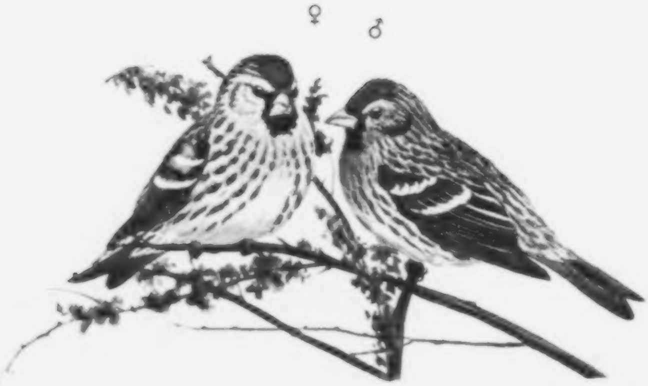
NEST: Builds a deep, saucer-shaped nest composed of lichens and twigs on branches of conifer trees. Frequently locates nest in a spruce tree, sometimes relatively close to the ground (2 to 70 feet). May breed during any month of the year, but mostly from January to May.

FOOD: Consumes a variety of foods, but seems to prefer seeds of Norway spruce and hemlock. Also eats insects, seeds of other conifers and deciduous trees, and some fruits.

REFERENCES: Forbush and May 1955, Terres 1980.

Common Redpoll

Carduelis flammea



L 5"

RANGE: Breeds in the northern Arctic region from northern Alaska to Baffin Island, and south to northern British Columbia, and east to Newfoundland. Resident in southern part of the breeding range. Winters from Alaska and northern Saskatchewan east to Newfoundland and south to about mid-United States.

STATUS: Irregular.

HABITAT: Inhabits open fields with scattered small spruces or other trees, or small shrubs in the north circumpolar region. In winter, forms large flocks and moves erratically, occasionally to the edge of forests.

SPECIAL HABITAT REQUIREMENTS: Open field sites with perch areas.

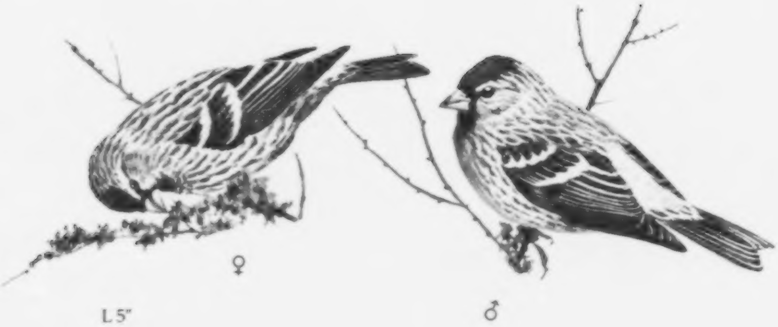
NEST: Generally places nest 3 to 7 feet above the ground, either in a dwarf tree or shrub or on the ground in open tundra. Conceals nest in vegetation, generally near lakes or ponds.

FOOD: Gleans seeds from birches, alders, pines, willows, and shrubs. Also forages on the ground for seeds of grasses, forbs, and trees, and for insects. Moves during winter to find sources of food.

REFERENCES: Forbush and May 1955, Grinnell 1943.

Hoary Redpoll

Carduelis hornemanni



RANGE: Breeds in western and northern Alaska, northern Yukon, northern and east-central Mackenzie, southern Victoria Island, Keewatin, northeastern Manitoba, Southhampton Island, and northern Quebec. Also on Ellesmere, Bylot, and northern Baffin Islands, and in northern Greenland. Winters in the breeding range (except extreme northern areas) and south, irregularly, to southern Canada, and Montana to northern Illinois, New York, and New England.

HABITAT: Breeds in shrubby areas, including sparse, low vegetation in open tundra. In winter, inhabits open areas, fields, and open woodlands.

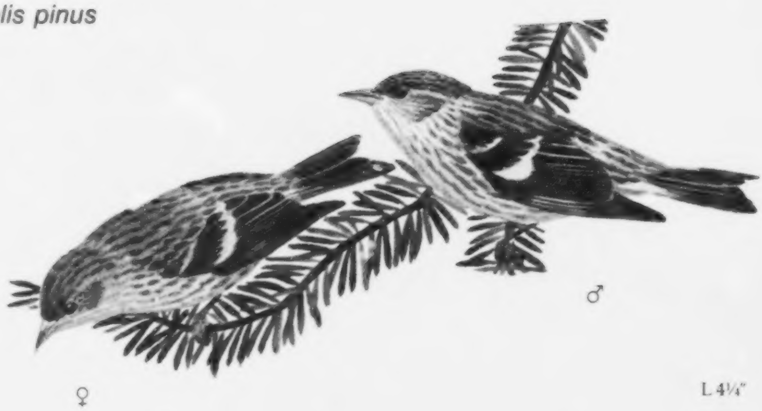
NEST: Builds nest with dry grass, rootlets, and willow down or feathers; places it in low shrubs such as willow or dwarf birch and often over water.

FOOD: Mostly eats plant materials, especially seeds, but some insects and larvae in summer. Forages on the ground, and gleans food from branches and leaves of shrubs.

REFERENCES: Bent 1968.

Pine Siskin

Carduelis pinus



RANGE: Breeds from central Alaska south through the Western United States and east across Canada to Newfoundland. Winters throughout Eastern and Southern United States from New England, the Great Lakes, and the Northern Plains States, south into Mexico. Resident in the southern Rocky Mountains, southwestern deserts, and the Pacific Coast.

STATUS: Irregularly common in large flocks.

HABITAT: Generally inhabits coniferous forests, and prefers those with low to intermediate canopy cover. Less numerous in second-growth alders, aspen, and broadleaf trees along the fringes of coniferous forests. Very social, forms flocks with other species.

SPECIAL HABITAT REQUIREMENTS: Coniferous forests.

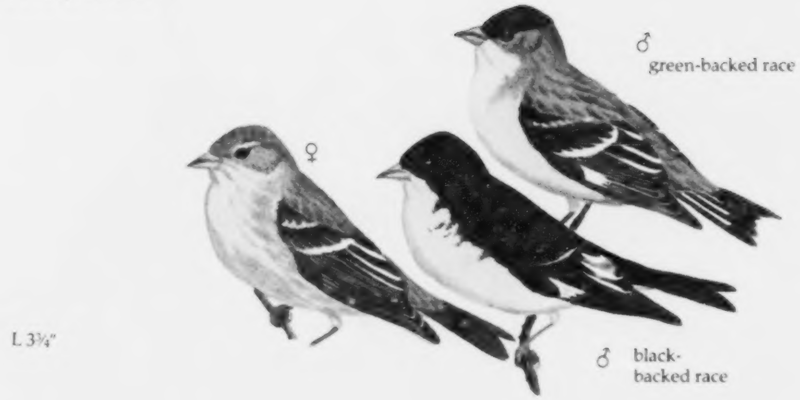
NEST: Generally locates nest on a conifer branch, often in the shelter of another small branch and usually 15-35 feet above the ground.

FOOD: An opportunistic feeder that gleans food from foliage, bark of conifers, and from the ground. Also eats seeds, some berries, and a wide variety of insects.

REFERENCES: Forbush and May 1955, Weaver and West 1943, Terres 1980.

Lesser Goldfinch

Carduelis psaltria



RANGE: Resident from southwestern Washington, western Oregon, northern California, northern Utah, northern Colorado, northwestern Oklahoma, and central and southern Texas south to Baja California and South America.

STATUS: Common.

HABITAT: Generally inhabits scattered trees, woodland edge, second growth, open fields, pastures, and human habitation. Often found in drier foothill regions, in the deserts, and up to 7,300 feet in elevation and usually near water.

SPECIAL HABITAT REQUIREMENTS: Scattered trees and nearby water.

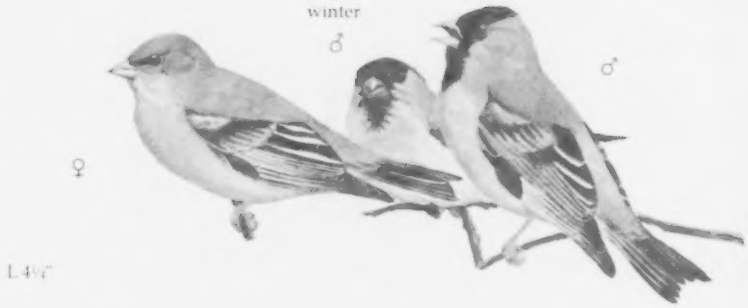
NEST: Saddles nest on a branch of a shrub or tree. Generally locates nest in dense foliage, 2 to 30 feet above the ground. Sometimes nests in loose colonies.

FOOD: Often forages in large flocks throughout the year, gleaning food from or near the ground; rarely feeds in tree crowns. Eats seeds, fruits, flowers, and other plant material, as well as small quantities of insects.

REFERENCES: Coutlee 1968, Linsdale 1957, Verner and Boss 1980.

Lawrence's Goldfinch

Carduelis lawrencei



RANGE: Breeds from central California south to southern California, northwestern Baja California, and western Arizona. Winters from north-central California, central Arizona, southwestern New Mexico, and western Texas south to northern Baja California, southern Arizona, and northern Sonora.

STATUS: Locally common.

HABITAT: Inhabits oak woodlands, chaparral, riparian woodlands, pinyon-juniper associations, and weedy areas in arid regions, usually near water.

SPECIAL HABITAT REQUIREMENTS: Scattered oak trees and water.

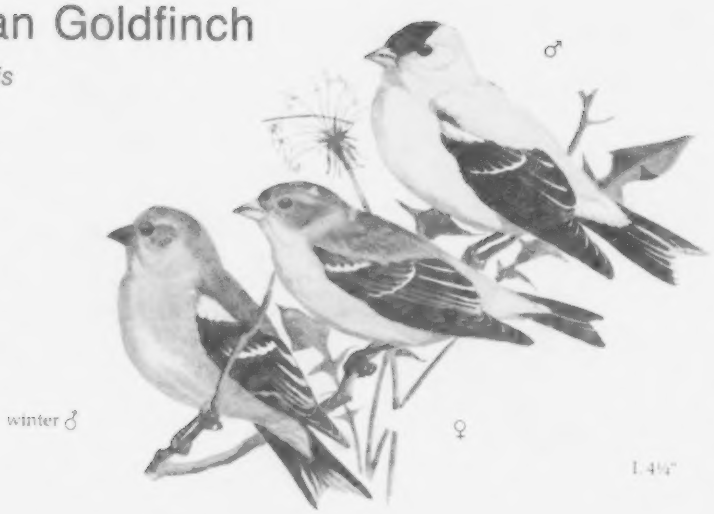
NEST: Prefers to nest in lichen-infested blue oaks that grow close together on dry slopes. Also nests in sycamores, and will often nest in small colonies. Locates nests about 20 feet above the ground in the forks of tree branches, usually 3 to 6 feet from the top of a main branch.

FOOD: Primarily eats seeds, gleaning them from foliage and the ground. Mostly eats weed seeds, but also shrub seeds and insects.

REFERENCES: Coutlee 1968, Linsdale 1957, Verner and Boss 1980.

American Goldfinch

Carduelis tristis



RANGE: Breeds from southern British Columbia and north-central Alberta east to central Ontario and southwestern Newfoundland, and south to California, southern Colorado, northeastern Texas, central Alabama, and South Carolina. Winters from southern British Columbia, the northern United States, southern Ontario, and Nova Scotia south to Mexico, the Gulf Coast, and southern Florida.

STATUS: Common.

HABITAT: Frequents habitats with thistles or cattails, such as open weedy fields, farmyards, swamps, pastures with scattered trees, and forest edges. In the West, inhabits riparian areas, especially those with willows present along streams, ditches, and ponds.

SPECIAL HABITAT REQUIREMENTS: Open weedy fields and scattered woody growth for nesting.

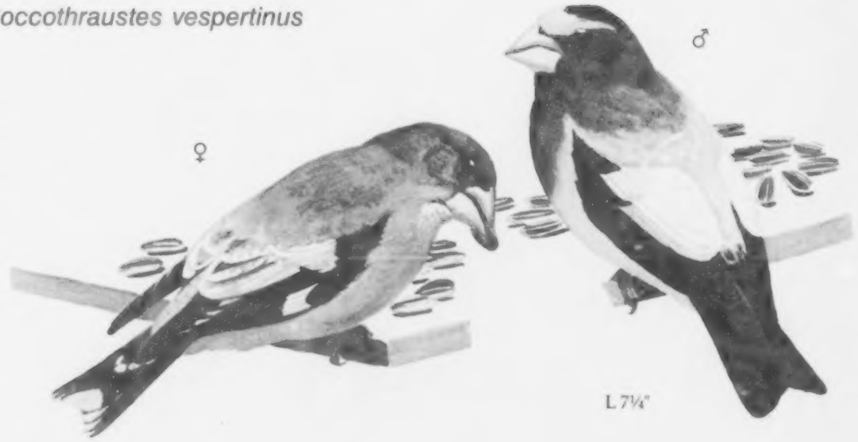
NEST: Usually builds nest in a cluster of upright branches or on a horizontal limb of a wide variety of trees or shrubs, typically 5 to 15 feet above the ground. Delays nesting until there is an abundant supply of seeds, particularly those of composites and thistles, to feed the young.

FOOD: Primarily eats seeds from a variety of plants, especially those in the composite family, as well as some insects in spring and summer, fruits, and succulent vegetation. Gleans food from the tips of weed stalks, the ground, and plants.

REFERENCES: Coutlee 1968, DeGraff et al. 1980, Forbush and May 1955, Holcomb 1969, Johnsgard 1979, Stokes 1950, Tyler in Bent 1968a.

Evening Grosbeak

Coccothraustes vespertinus



RANGE: Breeds from southwestern and north-central British Columbia to Nova Scotia and south, in the mountains, to central California, west-central and eastern Nevada, southeastern Arizona, southern New Mexico, the Mexican highlands, and, east of the Rocky Mountains, to Minnesota, Michigan, and Massachusetts. Winters throughout the breeding range sporadically south to southern California, southern Arizona, the Gulf Coast, and central Florida.

STATUS: Locally abundant.

HABITAT: Favors coniferous forests (primarily spruce and fir), throughout most of its range, often extending into areas where trees are quite sparse and into mixed forests. In winter, forms large flocks and may move downslope to oak or pine-oak habitats, parks, and around towns.

SPECIAL HABITAT REQUIREMENTS: Conifers.

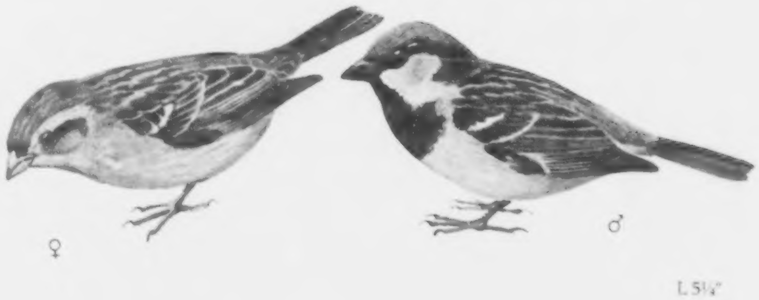
NEST: Usually places nest on a horizontal limb of a conifer, 20 to 100 feet above the ground. Builds a shallow cup, usually in a dense cluster of leaves near the end of a branch.

FOOD: Eats seeds, fruits, and buds from a variety of trees and shrubs. In summer, the diet includes insects. Picks vegetable matter from the branches and the ground; gleans insects from branches or hawks them in the air.

REFERENCES: Forbush and May 1955, Verner and Boss 1980.

House Sparrow

Passer domesticus



RANGE: First introduced from Europe in 1850, became established several years later. Now resident throughout most of North America, up to the edge of the tundra and south into Central America.

STATUS: Abundant.

HABITAT: Prefers to stay in the neighborhood of human dwellings; avoids large forests or other habitat far from human habitation. During winter, roosts in sheltered places such as open sheds and unoccupied buildings, under eaves or thick vines, or in a variety of holes and crevices.

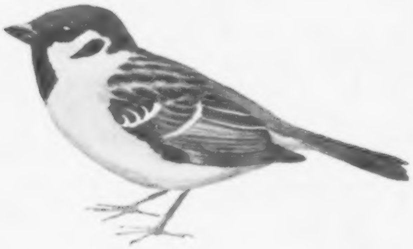
NEST: Constructs nest with grass, string, and any locally available material, in cavities, crevices, open areas under eaves, on ledges of buildings, and in trees or shrubs. Nests in colonies in some areas.

FOOD: Consumes a wide variety of food, most of which is gleaned from the ground; also eats fruits from trees. Eats a variety of insects, vegetables, fruits, seeds, grains, and garbage. Is considered a pest around farms and feedlots, where it eats livestock feeds.

REFERENCES: DeGraff et al. 1980, Forbush and May 1955, Summers-Smith 1958, 1963.

Eurasian Tree Sparrow

Passer montanus



L 5"

RANGE: Introduced from Europe and established in St. Louis, Missouri, in 1870; now also found in east-central Missouri and western Illinois.

STATUS: Locally common.

HABITAT: Occurs in residential areas, farmlands, fields, and open woodland around St. Louis, where it was introduced in 1870. It is far less agressive than its relative the house sparrow, but has slowly expanded its range to western Illinois.

NEST: Nests in natural cavities, crevices, and woodpecker holes, but appears to be a weak competitor for available nesting sites.

FOOD: Feeds primarily on the ground on weed seeds, insects, and waste grain. (Little information is available on food habits.)

REFERENCES: Bent 1958, Scott et al. 1977, Van Benthuysen in Farrand 1983c.

BIRD/COVER-TYPE MATRICES

We have attempted to summarize bird use of the major forest types, grasslands, and deserts of the United States. We have indicated bird use of wetland and other open habitats commonly encountered within forests, and conversely, in wooded habitats within deserts and grasslands, but have not emphasized coastal habitats. This publication is primarily intended to serve as a reference for forest and rangeland managers.

Information provided in the following matrices was compiled from many sources. The 20 habitat matrices for the eastern and western forest types are based upon the forest cover type groups in "Forest cover types of the United States and Canada," F. H. Eyre, editor, Society of American Foresters, Washington, D.C., 1980. The habitat matrices presented for the Great Plains are based upon regions as described in "Land resource regions and major land resource areas of the United States," Soil Conservation Service, U.S. Department of Agriculture Handbook 296, Washington, D.C., 1981.

Nonforest habitat types within these broad forest cover types and Plains regions, and their use by birds in both the breeding and non-breeding seasons, were developed from the following:

"Management of southern forests for nongame birds," R. M. DeGraaf, technical coordinator, General Technical Report SE-14, Southeastern Forest Experiment Station, Forest Service, U.S. Department of Agriculture, Asheville, NC, 1978

"Nongame bird habitat management in the coniferous forests of the western United States," R. M. DeGraaf, technical coordinator, General Technical Report PNW-64, Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, Portland, OR, 1978

"Management of north-central and northeastern forests for nongame birds," R. M. DeGraaf, technical coordinator, General Technical Report NC-51, North Central Forest Experiment Station, Forest Service, U.S. Department of Agriculture, St. Paul, MN, 1979

"Management of western forests and grasslands for nongame birds," R. M. DeGraaf, technical coordinator, General Technical Report INT-86, Intermountain Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, Ogden, UT, 1980

"New England wildlife: habitat, natural history, and distribution," R. M. DeGraaf and D. D. Rudis, General Technical Report NE-108, Northeastern Forest Experiment Station, Forest Service, U.S. Department of Agriculture, Broomall, PA, 1986

"Guide to bird habitats of the Ozark Plateau," K. E. Evans and R. A. Kirkman, General Technical Report NC-68, North Central Forest Experiment Station, Forest Service, U.S. Department of Agriculture, St. Paul, MN, 1981

"Bird-habitat relationships on southeastern forest lands," P. B. Hamel, H. E. LeGrand, Jr., M. R. Lennartz, and S. A. Gauthreaux, Jr., General Technical Report SE-22, Southeastern Forest Experiment Station, Forest Service, U.S. Department of Agriculture, Asheville, NC, 1982

"Birds of the Great Plains," P. A. Johnsgard, University of Nebraska Press, Lincoln, NB, 1979

"Wildlife habitats in managed forests—the Blue Mountains of Oregon and Washington," J. W. Thomas, technical editor, Agriculture Handbook 553, Forest Service, U.S. Department of Agriculture, Washington, DC, 1979

"California wildlife and their habitats; western Sierra Nevada," J. Verner and A. S. Boss, technical coordinators, General Technical Report PSW-37, Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, Berkeley, CA, 1980; and many unpublished reports provided by USDA Forest Service regional offices and colleagues.

Eastern Forest Cover Type Groups

Eastern White-Red-Jack Pine. Eastern white pine (*Pinus strobus*), red pine (*Pinus resinosa*), or jack pine (*Pinus banksiana*) composes most of the stocking. The northeastern and Lake States pine types all occur as essentially pure stands, usually on lighter soils. Eastern white pine occurs from the Canadian Maritime Provinces, across the Lake States to Manitoba, and down the Appalachian Mountains to Georgia. It is shade-tolerant and also occurs as a scattered tree in other types, and on many soils. Red pine is most extensive in the Lake States and southern Ontario, and also extends east to New England, Quebec, and the Maritime Provinces, where it usually occurs on small outwash areas, rocky slopes, or hilltops. It is shade-intolerant, and occurs in even-age stands. Jack pine is mainly found in the Lake States; it characteristically originates after fire and is a short-lived, intolerant pioneer on dry, sandy soils.

Red Spruce-Balsam Fir. Red spruce (*Picea rubens*) or balsam fir (*Abies balsamea*) composes most of the stocking. These species frequently occur together from the Maritimes and adjacent Quebec, northern New England, New York, and the Appalachians. Either may be pure or compose a majority of the stocking; paper birch (*Betula papyrifera*), aspen (*Populus tremuloides* and *P. grandidentata*), red maple (*Acer rubrum*), eastern white pine, and northern white cedar (*Thuja occidentalis*) are common associates. Red spruce is long-lived and shade-tolerant; disturbance creates conditions favorable for establishment of balsam fir.

Longleaf Pine-Slash Pine. Longleaf pine (*Pinus palustris*) or slash pine (*P. elliottii*) composes a majority of the stocking. This type occurs on the Gulf and Atlantic coastal plains from Louisiana to South Carolina, on a range of sites from sandy ridges to poorly drained flatwoods. Excluding fire allows slash pine to become established, and hardwoods and shrubs commonly proliferate. Where longleaf pine stands are treated with prescribed fire, an open understory results.

Loblolly Pine-Shortleaf Pine. Loblolly (*Pinus taeda*) and shortleaf (*P. echinata*) pines together compose the majority of the stocking. Loblolly pine predominates except on drier sites; the type occurs from Delaware south along the Atlantic coastal plain and Piedmont to Florida and west along the Gulf coastal plain to east Texas. Typically found on moist sites, it spreads to drier sites if fire is controlled. The type is succeeded by upland oaks.

Oak-Pine. Upland oaks and pines (usually loblolly or shortleaf) each comprise 25 percent of the stocking. Oak and pine types generally occur from east Texas to Georgia on upland sites on the Gulf coastal plain and Piedmont, and north in smaller areas through the Appalachians to include table mountain pine (*P. pungens*)-oak, Virginia pine (*P. virginiana*)-oak, and pitch pine (*P. resinosa*)-oak types.

Oak-Hickory. Upland oaks and hickories (*Carya* spp.) compose most of the stocking, and pines constitute less than 25 percent of the stocking. Oak-hickory forests occur across a wide geographic range from Texas, Missouri, and Iowa to southern New England, with many oak and other hardwood species involved under various physiographic conditions.

Oak-Gum-Cypress. In these bottomland forests of the lower Mississippi River Valley and those of its major tributaries from the Ohio River south, tupelo (*Nyssa*), blackgum (*N. sylvatica*), sweetgum (*Liquidambar styraciflua*), oak (*Quercus*), or bald cypress (*Taxodium distichum*), singly or in combination, compose most of the stocking; pines contribute less than 25 percent of the stocking.

Elm-Ash-Cottonwood. Elm (*Ulmus*), ash (*Fraxinus*), cottonwood (*Populus deltoides*), or red maple compose most of the stocking in these forests. Common associates in river bottoms (especially the Missouri River drainage) are sycamore (*Platanus*) and willow (*Salix*). On uplands, including those in Lake States, western New York, and southern New England, common associates are red maple (*Acer rubrum*) and American beech (*Fagus grandifolia*).

Northern Hardwoods. Sugar (*Acer saccharum*) or red maple American beech, or yellow birch (*Betula alleghaniensis*), singly or in combination, compose most of the stocking. The northern hardwood type group varies geographically in its composition. It extends from the Maritimes through Wisconsin and south through the central Appalachians. Sugar maple is characteristic of the type group. Beech is absent in much of its western extent and on wetter sites in the East, where red maple and yellow birch also become common. Balsam fir and red spruce are common associates in the Northeast, aspen is common throughout; northern red oak (*Quercus rubra*), white ash (*Fraxinus americana*), eastern white pine, paper birch, and eastern hemlock (*Tsuga canadensis*) are commonly associated in the central and southern parts of the range, where the type is often called mixed woods.

Aspen-Birch. Quaking and bigtooth aspens or paper birch compose a majority of the stocking. Aspen and paper birch are transcontinental in distribution. Both are pioneer types that establish after fire and clearcutting. Aspen is unique in that almost all stands regenerate from root suckers. The type is short-lived and is succeeded on dry sites by red pine, red maple, or oaks; on intermediate sites by white pine; on moist fertile sites by northern hardwoods; and on the wettest sites by balsam fir. Paper birch is succeeded by spruce-fir in the northern parts of its range and by northern hardwoods and eastern hemlock on well-drained, fertile sites elsewhere.

Western Forest Cover Type Groups

Douglas-fir. Douglas-fir (*Pseudotsuga menziesii*) composes most of the stocking. Common associates are western hemlock (*Tsuga heterophylla*), western redcedar (*Thuja plicata*), true firs (*Abies*), redwood (*Sequoia sempervirens*), ponderosa pine (*Pinus ponderosa*), and larch (*Larix*). The type group predominates in the Pacific Northwest, but also occurs (decreasing southward) throughout the Rocky Mountains south to northern New Mexico.

Hemlock-Sitka Spruce. Western hemlock and/or Sitka spruce (*Picea sitchensis*) compose most of the stocking. Common associates include Douglas-fir, silver fir (*Abies amabilis*), and western redcedar. The type comprises the coastal forests of Washington and Oregon.

Redwood. Redwood (*Sequoia sempervirens*) composes most of the stocking. The type is restricted to the California fog belt, extending from southernmost Oregon south along the Pacific Coast to the Santa Lucia Mountains. The type extends inland to the reaches of coastal fogs. Common associates are Douglas-fir, grand fir (*Abies grandis*), and tanoak (*Lithocarpus densiflorus*).

Ponderosa Pine. Ponderosa pine composes most of the stocking. Common associates in the western part of the range (California, Oregon) include Jeffrey (*P. jeffreyi*), and sugar (*P. lambertiana*) pines; to the north, Douglas-fir and incense-cedar (*Libocedrus decurrens*); to the east, limber (*P. flexilis*), Arizona (*P. ponderosa* var. *arizonica*), and Chihuahua (*P. leiophylla* var. *chihuahuana*) pines; and throughout, white fir (*Abies concolor*). The type is generally distributed to the west, north, and east of the Great Basin and the deserts of the Southwest.

Western White Pine-Larch. Western white pine (*Pinus monticola*) composes most of the stocking. The type attains its best development in northern Idaho and northwestern Montana. Common associates include western redcedar, larch, white fir, Douglas-fir, lodgepole pine (*P. contorta*), and Engelmann spruce (*Picea engelmannii*). Such admixtures produce the "mixed conifer" type, as it is known locally. Western larch (*Larix occidentalis*) comprises a plurality of the stocking in some areas between the Columbia River in eastern Washington and the west slopes of the Rocky Mountains in Montana. Common associates are Douglas-fir, grand fir, western redcedar, and western white pine.

Lodgepole Pine. Lodgepole pine composes most of the stocking; the mid-elevation type occurs to 11,000 feet in the Rocky Mountains, to 11,500 feet in California, and to 6,000 feet in Oregon and Washington. Best development is on moist, sandy, or gravelly loam. Common associates are subalpine fir (*Abies lasiocarpa*), western white pine, Engelmann spruce, aspen, and larch.

Fir-Spruce. The true firs, Engelmann spruce, or Colorado blue spruce (*Picea pungens*) compose most of the stocking. Common associates are lodgepole pine and, at high elevation, mountain hemlock (*Tsuga mertensiana*).

Aspen-Hardwoods. Aspen (*Populus tremuloides*) or red alder (*Alnus rubra*) compose a majority of the stocking. The aspen type is the most common and extensive hardwood type in the western United States. It occurs primarily at middle elevations on a variety of sites in the Rocky Mountain cordillera, where it is usually succeeded by interior Douglas-fir. Aspen is usually first to dominate burns and other disturbed areas, where it produces even-aged stands. Where conifer seed sources are absent, aspen may exist as a virtual climax, where it vegetatively reproduces repeatedly, developing into all-aged stands.

All western aspen communities have an herbaceous understory, commonly forbs, but sometimes grasses and sedges. In the northern portion of the type range in the West, willows, common bearberry, and buffaloberry are common understory shrubs. Farther south, snowberry, chokecherry, and western serviceberry are more common.

Red alder is essentially coastal and the most important hardwood of the Pacific Northwest; best growth is on moist, rich, loamy bottomlands.

Chaparral. Chaparral consists of heavily branched, dwarfed trees or shrubs, commonly evergreens, whose canopy at maturity covers at least 50 percent of the ground. Common constituent plants include oaks (*Quercus*), Mountain-mahogany (*Cercocarpus*), silktassel (*Garrya*), ceanothus (*Ceanothus*), manzanita (*Arctostaphylos*), and chamise (*Adlenostoma*).

Pinyon-Juniper. Pinyon pines (primarily *P. edulis*, *P. cembroides*, *P. monophylla*) and junipers (primarily *Juniperus osteosperma*, *J. deppeana*, and *J. monosperma*) compose most of the stocking. This type is widely distributed throughout the semiarid West, usually on dry, shallow, rocky soils of mesas, benches, and canyon walls.

Eastern Open, Wetland, Plains, Deserts, and Other Nonforest Habitats

Field, Glade, Orchard. Primarily grass, hayfields, abandoned agricultural land, and fruit orchards with grassy ground cover.

Pasture, Wet or Sedge Meadow. Agricultural lands that are too wet, steep, or rocky for crops; meadows dominated by grasses or sedges (*Carex* spp.) with soils that are saturated or seasonally flooded.

Fresh Marsh, Pond. Palustrine and lacustrine wetlands, permanently flooded, containing emergents such as cattails (*Typha*), bullrushes (*Scirpus*), rushes (*Juncus*), and floating-leaved plants: spatterdock (*Nuphar*) and water lily (*Nymphaea*).

Wooded Swamp, Bog, Shrub Swamp. Palustrine, forested wetlands, either needle-leaved evergreen or broad-leaved deciduous; dominant plants are Atlantic white-cedar (*Chamaecyparis thyoides*), black spruce (*Picea mariana*), or red maple. Wooded swamps are seasonally or permanently flooded; bogs are permanently flooded.

Lake, Stream, River. Stratified lacustrine wetlands; permanently flowing watercourses of any width.

Sand Pine, Scrub Oak. Southeastern and southern woodlands on droughty, infertile, coarse-textured or sandy soils that support any of the scrub oaks (*Q. laevis*, *Q. incana*, *Q. marilandica*, or *Q. stellata* var. *margaretta*) or sand pine (*Pinus clausa*).

Pocosins. Bay-swamp, and pond pine (*Pinus serotina*) woodlands with boggy soils in which broadleaf evergreens predominate: black gum (*Nyssa sylvatica* var. *biflora*), persea (*Persea barbonia*), magnolia (*Magnolia virginiana*), gordonia (*Gordonia lasianthus*) and associates, of pond pine, Atlantic white-cedar.

Everglades, Mangroves. Palustrine wetlands in southern Florida that are semi-permanently flooded, dominated by saw grass (*Cladium jamaicense*); estuarine, intertidal wetlands dominated by mangrove (*Rhizophora*).

Alpine Tundra, Krummholtz. Elevated slopes above timberline characterized by low, shrubby, slow-growing woody plants and a ground cover of boreal lichens, sedges, and grasses; the transition zone from subalpine forest to alpine tundra characterized by dwarfed, wind-sheared trees.

Great Plains Habitats

Gulf Prairies and Marshes. Moderate to tall dense open grasslands dominated by seacoast bluestem (*Andropogon littoralis*) and coastal sacahuista (*Spartina spartinae*).

East Texas Prairies, Cross Timbers, Pineywoods, and Post Oak Savanna. Open grassy savanna to dense brushland occurring in north-central Texas; pine-hardwood forest and grazing lands of east Texas; midgrass prairie dominated by little bluestem (*Andropogon scoparius*) and shin oak (*Quercus mohriana*).

South Texas Shrub-Grassland. Vegetation ranges from desert grass-shrub vegetation in west Texas to mixed oak savanna in the eastern Edwards Plateau region to open grassland on the Rio Grande plain.

Southern Plains. Open to moderately dense short grasslands occurring from southeastern Colorado and central Oklahoma south through eastern New Mexico and Texas panhandle. Natural vegetation is characterized by grama (*Bouteloua*) and buffalo grass (*Buchloe*).

Central Plains. Grasslands ranging from short grasses in the West to tall grasses in the East. Includes the region from southeastern Wyoming and northeastern Colorado east through Indiana.

Northern Plains. Plains region from north-central Montana and northwestern Minnesota south to southeastern Wyoming and northwestern Iowa. Area supports grassland vegetation dominated by western wheatgrass (*Agropyron smithii*) and needlegrass (*Stipa*) in the West and by little bluestem in the East.

Wetland and Riparian Habitats. All Great Plains wetland and riparian habitats, including marshes, ponds, lakes, streams, stock ponds, and woodlands associated with wetlands.

Shelterbelts and Woodlots. Planted bands of trees that serve as windbreaks to protect fields or farmsteads; other wooded areas surrounded by agricultural lands.

Pine-Oak, Brushy Woodland, Badlands-Juniper. Includes dry woodlands of pines and oaks with or without a brushy understory. Badlands-juniper region is largely devoid of vegetation but may have scattered junipers on suitable sites.

Southwestern and Western Nonforested Habitats

Relict Conifer Forest, Madrean Evergreen Woodland. Warm-temperate forests and woodlands in the Southwest. Relict conifer forests consist of small populations of cypress (*Cupressus*) and closed-cone pines, bishop pine (*Pinus muricata*), and knobcone pine (*P. attenuata*), restricted to canyons and suitable slopes along drainages. Madrean evergreen woodland is composed primarily of evergreen oaks but includes madrean pines.

Aspen. Mid-elevation sites in the Great Basin consisting of pure or nearly pure stands of quaking aspen.

Great Basin Shrubsteppe. Open to dense stands of shrubs and low trees, including big sagebrush (*Artemisia tridentata*), saltbush (*Atriplex confertifolia*), greasewood (*Sarcobatus vermiculatus*), or creosote bush (*Larrea divaricata*).

Sonoran Desert Scrub. Open to dense vegetation of shrubs, low trees, and succulents dominated by paloverde (*Cercidium microphyllum*), pricklypear (*Opuntia* spp.), and giant saguaro (*Cereus giganteus*).

Chihuahuan Desert Scrub. Open stands of creosote bush and large succulents (*Ferocactus pringlei*, *Echinocactus platyaconthus*) in southern New Mexico and southwest Texas.

Mohave Desert Scrub. Located between the Great Basin desert scrub and the Sonoran desert scrub, it is intermediate between them, sharing plant species of both but containing the endemic arboreal leaf succulent, Joshua tree (*Yucca brevifolia*).

Desert Riparian Deciduous Woodland, Marsh. Woodlands, especially of cottonwoods, that occur where desert streams provide sufficient moisture for a narrow band of trees and shrubs along the margins.

Annual Grasslands, Farms. Grasslands dominated by wild oat (*Avena* spp.), ripgut brome (*Bromus rigidus*), soft chess (*Bromus mollis*), bur clover (*Medicago hispida*), and filaree (*Erodium* spp.) with less than 5 percent woody cover.

River, Riparian Woodland, Subalpine Marsh. Occurs at elevations where stream conditions provide sufficient permanent moisture for emergent plants, or for a narrow band of deciduous trees and shrubs; at low elevation characterized by cottonwood and sycamore, at mid-elevation by white alder (*Alnus rhombifolia*) and bigleaf maple (*Acer macrophyllum*), and at high elevation by willow.

Mountain and Alpine Meadows. Sedges (*Carex*) and grasslike plants (*Heleocharis*, *Scirpus*) above treeline.

Table 1—Birds occurring in eastern forest types

Bird Species	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch	Aspen-birch
Double-crested Cormorant							X			
Anhinga							X			
American Bittern							X			
Least Bittern							X			
Great Blue Heron							X	X		
Great Egret							X			
Snowy Egret							X			
Little Blue Heron							X			
Cattle Egret							X			
Green-backed Heron							X	X		
Black-crowned Night-Heron							X			
Yellow-crowned Night-Heron							X			
Glossy Ibis							X			
White-faced Ibis							X			
Wood Duck	X	X					X	X	X	
American Black Duck								X		
Gadwall								X		
Ring-necked Duck	X	X							X	
Common Goldeneye	X	X						X	X	
Bufflehead								X	X	
Hooded Merganser	X	X				X	X	X	X	X
Common Merganser	X	X				X		X	X	X
Black Vulture			X	X	X	X	X			
Turkey Vulture	X		X	X	X	X	X	X	X	
Osprey							X			
American Swallow-tailed Kite			X		X		X			
Missippi Kite				X	X		X			
Bald Eagle	X	X	X	X	X		X	X	X	
Sharp-shinned Hawk	X	X	X	X	X	X	X	X	X	X
Cooper's Hawk	X	X	X	X	X	X	X	X	X	X
Northern Goshawk	X	X			X	X			X	X
Red-shouldered Hawk	X		X	X		X	X	X	X	X
Broad-winged Hawk	X	X	X	X	X	X			X	X
Short-tailed Hawk							X			
Red-tailed Hawk	X	X	X	X	X	X		X	X	X
Golden Eagle	X	X			X	X			X	X
American Kestrel	X	X	X	X	X	X		X	X	X
Merlin	X	X	X	X						
Peregrine Falcon	X	X	X	X	X	X		X	X	X
Spruce Grouse		X								

(Continued)

Table 1—Birds occurring in eastern forest types—continued

Bird Species	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch	Aspen-birch
Ruffed Grouse	X	X			X	X			X	X
Wild Turkey	X		X	X	X	X	X	X	X	X
Northern Bobwhite	X		X	X	X	X				
Yellow Rail		X								
King Rail							X			
Virginia Rail								X		
Sora							X			
Purple Gallinule							X			
Common Moorhen							X	X		
Limpkin							X			
Solitary Sandpiper								X		
Spotted Sandpiper								X		
Upland Sandpiper				X	X	X				
Common Snipe							X	X		
American Woodcock	X	X	X	X	X	X	X	X	X	X
Rock Dove			X	X	X	X	X			
Mourning Dove	X	X	X	X	X	X	X		X	X
Common Ground-Dove			X	X	X	X				
Black-billed Cuckoo	X	X			X	X		X	X	X
Yellow-billed Cuckoo	X		X	X	X	X	X	X	X	X
Common Barn-Owl			X	X	X	X				
Eastern Screech-Owl	X	X	X	X	X	X	X	X	X	X
Great Horned Owl	X	X	X	X	X	X	X	X	X	X
Northern Hawk-Owl		X								X
Burrowing Owl			X	X	X	X				
Barred Owl	X	X		X		X	X	X	X	
Great Gray Owl		X								X
Long-eared Owl	X	X		X	X	X				
Boreal Owl		X							X	
Northern Saw-whet Owl	X	X			X	X			X	X
Common Nighthawk	X	X	X	X	X	X	X	X	X	X
Chuck-will's-widow			X	X	X	X				
Whip-poor-will	X	X	X	X	X	X	X	X	X	X
Chimney Swift	X	X	X	X	X	X	X	X	X	X
Ruby-throated Hummingbird	X	X	X	X	X	X	X	X	X	X
Belted Kingfisher	X	X			X	X	X	X	X	X
Red-headed Woodpecker			X	X	X	X	X	X		
Red-bellied Woodpecker			X	X	X	X	X	X		
Yellow-bellied Sapsucker	X	X	X	X	X	X	X	X	X	X
Downy Woodpecker	X	X	X	X	X	X	X	X	X	X

(Continued)

Table 1—Birds occurring in eastern forest types—continued

Bird Species	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch	Aspen-birch
Hairy Woodpecker	X	X	X	X	X	X	X	X	X	X
Red-cockaded Woodpecker			X	X	X					
Three-toed Woodpecker		X								
Black-backed Woodpecker		X								
Northern Flicker	X	X	X	X	X	X	X	X	X	X
Pileated Woodpecker	X	X	X	X	X	X	X	X	X	X
Olive-sided Flycatcher	X	X							X	X
Eastern Wood-Pewee	X	X	X	X	X	X	X	X	X	X
Yellow-bellied Flycatcher	X	X							X	
Acadian Flycatcher					X	X	X	X		
Alder Flycatcher	X	X						X	X	X
Willow Flycatcher						X	X	X	X	X
Least Flycatcher	X	X				X		X	X	X
Eastern Phoebe	X	X	X	X	X	X	X	X	X	X
Great Crested Flycatcher	X	X	X	X	X	X	X	X	X	
Eastern Kingbird	X		X	X	X	X		X	X	X
Purple Martin	X	X	X	X	X	X	X	X	X	X
Tree Swallow	X	X	X	X			X	X	X	X
Northern Rough-winged Swallow	X	X	X	X	X	X		X	X	X
Bank Swallow	X	X			X	X		X	X	X
Cliff Swallow	X	X		X	X		X	X	X	X
Barn Swallow	X	X	X	X	X	X	X	X	X	X
Gray Jay		X							X	
Blue Jay	X	X	X	X	X	X	X	X	X	X
American Crow	X	X	X	X	X	X	X	X	X	X
Fish Crow			X	X	X		X			
Common Raven	X	X			X	X		X	X	X
Black-capped Chickadee	X	X		X	X	X		X	X	X
Carolina Chickadee	X		X	X	X	X	X			
Boreal Chickadee		X							X	
Tufted Titmouse	X		X	X	X	X	X	X		
Red-breasted Nuthatch	X	X	X	X	X	X			X	
White-breasted Nuthatch	X	X	X	X	X	X	X	X	X	X
Brown-headed Nuthatch			X	X	X					
Brown Creeper	X	X	X	X	X	X	X	X	X	X
Carolina Wren	X		X	X	X	X	X	X		
Bewick's Wren					X	X				
House Wren	X	X	X	X	X	X	X	X	X	X
Winter Wren	X	X	X	X	X	X	X	X	X	X
Marsh Wren							X	X		

(Continued)

Table 1—Birds occurring in eastern forest types—continued

Bird Species	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch	Aspen-birch
Golden-crowned Kinglet	X	X	X	X	X	X	X	X	X	X
Ruby-crowned Kinglet	X	X	X	X	X		X	X	X	
Blue-gray Gnatcatcher			X	X	X	X	X	X		X
Eastern Bluebird	X		X	X	X	X		X	X	X
Veery	X	X				X		X	X	X
Gray-cheeked Thrush		X								
Swainson's Thrush	X	X							X	X
Hermit Thrush	X	X	X	X	X		X	X	X	X
Wood Thrush	X	X		X	X	X	X	X	X	X
American Robin	X	X	X	X	X	X	X	X	X	X
Gray Catbird	X	X	X	X	X	X	X	X	X	X
Northern Mockingbird			X	X	X	X	X	X		
Brown Thrasher	X	X	X	X	X	X	X	X	X	X
Water Pipit							X			
Bohemian Waxwing										X
Cedar Waxwing	X	X	X	X	X	X	X	X	X	X
Northern Shrike	X	X							X	X
Loggerhead Shrike	X		X	X	X	X	X			X
European Starling	X			X	X	X	X	X	X	X
White-eyed Vireo				X	X	X	X	X	X	X
Solitary Vireo	X	X	X	X	X		X		X	X
Yellow-throated Vireo			X	X		X	X	X	X	
Warbling Vireo						X	X	X	X	
Philadelphia Vireo									X	X
Red-eyed Vireo	X	X		X	X	X	X	X	X	X
Bachman's Warbler							X			
Blue-winged Warbler						X			X	X
Golden-winged Warbler					X	X			X	X
Tennessee Warbler	X	X							X	X
Orange-crowned Warbler		X					X			
Nashville Warbler	X	X							X	X
Northern Parula	X	X		X	X	X	X	X	X	X
Yellow Warbler	X	X				X	X	X	X	X
Chestnut-sided Warbler	X	X			X	X			X	X
Magnolia Warbler	X	X							X	
Cape May Warbler	X	X								
Black-throated Blue Warbler	X	X				X			X	X
Yellow-rumped Warbler	X	X	X	X	X	X	X	X	X	X
Black-throated Green Warbler	X	X		X	X		X		X	
Blackburnian Warbler		X				X			X	

(Continued)

Table 1—Birds occurring in eastern forest types—continued

Bird Species	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch	Aspen-birch
Yellow-throated Warbler	X		X	X	X	X	X	X		
Pine Warbler	X		X	X	X				X	
Prairie Warbler	X		X	X	X	X	X			X
Palm Warbler	X	X	X	X						
Bay-breasted Warbler	X	X								
Blackpoll Warbler		X								
Cerulean Warbler					X	X		X		
Black-and-white Warbler	X	X	X	X	X	X	X	X	X	X
American Redstart	X	X				X	X	X	X	X
Prothonotary Warbler							X	X		
Worm-eating Warbler				X	X	X	X			
Swainson's Warbler	X						X			
Ovenbird	X	X			X	X	X	X	X	X
Northern Waterthrush	X	X					X	X	X	
Louisiana Waterthrush					X	X	X	X		
Kentucky Warbler					X	X	X	X		
Mourning Warbler	X	X							X	X
Common Yellowthroat	X	X	X	X	X	X	X	X	X	X
Hooded Warbler				X	X	X	X			
Wilson's Warbler		X								
Canada Warbler	X	X						X	X	X
Yellow-breasted Chat	X		X	X	X	X	X	X		
Summer Tanager			X	X	X	X	X			
Scarlet Tanager	X				X	X	X	X	X	X
Northern Cardinal	X		X	X	X	X	X	X	X	
Rose-breasted Grosbeak	X	X				X		X	X	X
Blue Grosbeak				X	X	X	X			
Indigo Bunting	X		X	X	X	X	X	X	X	X
Painted Bunting				X		X	X			
Dickcissel				X	X	X				
Rufous-sided Towhee	X		X	X	X	X	X	X	X	X
Bachman's Sparrow			X	X	X	X				
American Tree Sparrow	X	X		X	X	X		X	X	X
Chipping Sparrow	X	X	X	X	X	X			X	X
Lark Sparrow				X		X				
Fox Sparrow	X	X	X	X			X			
Song Sparrow	X	X	X	X	X	X	X	X	X	X
Lincoln's Sparrow							X			
Swamp Sparrow		X								
White-throated Sparrow	X	X	X	X	X	X	X	X	X	X

(Continued)

Table 1—Birds occurring in eastern forest types—continued

Bird Species	White-red-jack pine	Spruce-fir	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood	Maple-beech-birch	Aspen-birch
White-crowned Sparrow				X	X	X				
Dark-eyed Junco	X	X	X	X	X	X		X	X	X
Red-winged Blackbird							X	X		
Rusty Blackbird		X					X	X		
Brewer's Blackbird				X	X	X				
Common Grackle	X									
Brown-headed Cowbird	X	X	X	X	X	X	X	X	X	X
Orchard Oriole					X	X	X	X		
Northern Oriole						X	X	X	X	X
Pine Grosbeak	X	X								
Purple Finch	X	X	X	X	X	X		X	X	X
House Finch								X		
Red Crossbill	X	X		X	X					
White-winged Crossbill	X	X			X					
Pine Siskin	X	X	X	X	X	X			X	
American Goldfinch										X
Evening Grosbeak	X	X			X	X		X	X	

Table 2 —Birds occurring in eastern nonforest habitats (exclusive of Great Plains)

Bird Species	Field, glade, orchard	Pasture, wet or sedge meadows	Fresh marsh, pond	Wooded swamp, bog, shrub swamp	Lake, stream, river	Sand pine-scrub oak	Pocosins	Everglades, mangroves, tropical hardwoods	Alpine tundra, krummholtz
Common Loon					X				
Pied-billed Grebe			X	X	X			X	
Horned Grebe			X		X				
Red-necked Grebe			X		X				
Double-crested Cormorant					X			X	
Anhinga			X		X			X	
American Bittern		X	X		X			X	
Least Bittern		X	X					X	
Great Blue Heron		X	X		X		X	X	
Great Egret		X	X				X	X	
Snowy Egret		X	X				X	X	
Little Blue Heron			X				X	X	
Cattle Egret	X	X	X				X	X	
Green-backed Heron		X	X	X	X		X	X	
Black-crowned Night-Heron			X	X	X		X	X	
Yellow-crowned Night-Heron			X	X	X		X	X	
Glossy Ibis			X				X	X	
Fulvous Whistling-Duck			X					X	
Canada Goose	X	X	X		X				
Wood Duck			X	X	X		X	X	
Green-winged Teal		X	X					X	
American Black Duck		X	X	X	X				
Mottled Duck			X					X	
Mallard	X	X	X		X				
Northern Pintail			X						
Blue-winged Teal			X					X	
Northern Shoveler			X					X	
Gadwall			X	X					
American Wigeon		X	X		X				
Redhead			X		X				
Ring-necked Duck			X	X	X				
Greater Scaup					X				
Lesser Scaup			X		X				
Common Goldeneye			X		X				
Bufflehead			X		X				
Hooded Merganser			X	X	X				
Common Merganser			X		X				
Red-breasted Merganser			X		X				
Ruddy Duck			X		X				
Black Vulture	X	X				X	X	X	

(Continued)

Table 2—Birds occurring in eastern nonforest habitats (exclusive of Great Plains)—Continued

Bird Species	Field, glade, orchard	Pasture, wet or sedge meadows	Fresh marsh, pond	Wooded swamp, bog, shrub swamp	Lake, stream, river	Sand pine-scrub oak	Pocosins	Everglades, mangroves, tropical hardwoods	Alpine tundra, krummholtz
Turkey Vulture	X	X				X	X	X	
Osprey			X		X		X	X	
American Swallow-tailed Kite			X					X	
Black-shouldered Kite	X								
Snail Kite								X	
Mississippi Kite						X	X		
Bald Eagle			X		X			X	
Northern Harrier		X	X				X	X	
Sharp-shinned Hawk				X				X	
Cooper's Hawk	X	X							
Red-shouldered Hawk				X			X	X	
Broad-winged Hawk								X	
Short-tailed Hawk								X	
Red-tailed Hawk	X	X				X	X	X	
Rough-legged Hawk	X	X	X						
Golden Eagle	X	X							
American Kestrel	X	X				X	X	X	
Merlin	X	X	X				X	X	
Peregrine Falcon	X	X	X		X		X	X	X
Ring-necked Pheasant	X	X							
Ruffed Grouse	X								
Wild Turkey	X	X				X			
Northern Bobwhite	X					X			
Yellow Rail		X	X					X	
Black Rail			X				X	X	
King Rail			X					X	
Virginia Rail			X					X	
Sora			X					X	
Purple Gallinule			X					X	
Common Moorhen				X		X			X
American Coot			X		X			X	
Limpkin				X				X	
Sandhill Crane		X	X					X	
Piping Plover					X				
Killdeer		X	X		X			X	
Greater Yellowlegs		X							
Lesser Yellowlegs		X							
Solitary Sandpiper			X	X	X				
Spotted Sandpiper					X			X	
Upland Sandpiper		X							

(Continued)

Table 2 —Birds occurring in eastern nonforest habitats (exclusive of Great Plains)—Continued

Bird Species	Field, glade, orchard	Pasture, wet or sedge meadows	Fresh marsh, pond	Wooded swamp, bog, shrub swamp	Lake, stream, river	Sand pine-scrub oak	Pocosins	Everglades, mangroves, tropical hardwoods	Alpine tundra, krummholtz
Common Snipe		X	X	X				X	
American Woodcock	X	X	X	X			X	X	
Common Tern					X				
Black Tern			X		X				
Rock Dove	X	X							
White-crowned Pigeon								X	
Mourning Dove	X	X				X	X	X	
Common Ground-Dove	X					X		X	
Yellow-billed Cuckoo						X	X	X	
Mangrove Cuckoo								X	
Smooth-billed Ani								X	
Common Barn-Owl	X	X	X			X		X	
Eastern Screech-Owl		X	X				X	X	
Great Horned Owl	X	X	X	X		X	X	X	
Snowy Owl	X	X	X						
Burrowing Owl						X			
Barred Owl				X			X	X	
Great Gray Owl	X	X	X	X					
Long-eared Owl	X	X	X						
Short-eared Owl	X	X	X					X	
Common Nighthawk	X	X	X		X	X		X	
Chuck-will's-widow						X		X	
Whip-poor-will	X							X	
Chimney Swift	X	X	X		X				
Ruby-throated Hummingbird	X	X						X	
Belted Kingfisher			X		X			X	
Red-headed Woodpecker	X	X				X	X		
Red-bellied Woodpecker	X			X		X	X	X	
Yellow-bellied Sapsucker	X					X	X	X	
Downy Woodpecker	X			X		X	X	X	
Hairy Woodpecker			X		X	X			
Northern Flicker	X	X				X		X	
Pileated Woodpecker								X	
Olive-sided Flycatcher				X					
Eastern Wood-Pewee	X						X		
Yellow-bellied Flycatcher				X					
Acadian Flycatcher				X			X		
Alder Flycatcher				X					
Willow Flycatcher	X								
Least Flycatcher	X			X					

(Continued)

Table 2—Birds occurring in eastern nonforest habitats (exclusive of Great Plains)—Continued

Bird Species	Field, glade, orchard	Pasture, wet or sedge meadows	Fresh marsh, pond	Wooded swamp, bog, shrub swamp	Lake, stream, river	Sand pine-scrub oak	Pocosins	Everglades, mangroves, tropical hardwoods	Alpine tundra, krummholtz
Eastern Phoebe	X	X		X		X	X	X	
Great Crested Flycatcher						X	X	X	
Western Kingbird								X	
Eastern Kingbird	X	X	X			X		X	
Gray Kingbird								X	
Scissor-tailed Flycatcher								X	
Horned Lark	X	X							
Purple Martin	X	X	X		X		X	X	
Tree Swallow	X	X	X	X	X			X	
Northern Rough-winged Swallow	X	X	X		X			X	
Bank Swallow	X	X	X		X				
Cliff Swallow	X	X	X		X				
Barn Swallow	X	X	X		X				
Gray Jay									X
Blue Jay	X	X		X		X	X	X	
Scrub Jay						X			
American Crow	X	X				X	X	X	
Fish Crow			X		X		X	X	
Common Raven		X							X
Black-capped Chickadee	X			X					X
Carolina Chickadee	X			X		X	X		
Boreal Chickadee				X					X
Tufted Titmouse	X			X			X	X	
Red-breasted Nuthatch				X		X	X		X
White-breasted Nuthatch	X			X			X		
Brown-headed Nuthatch						X	X	X	
Brown Creeper	X			X		X	X		
Carolina Wren	X	X	X	X		X	X	X	
Bewick's Wren	X	X							
House Wren	X	X		X		X	X	X	
Winter Wren				X			X		
Sedge Wren		X						X	
Marsh Wren		X	X					X	
Golden-crowned Kinglet				X		X	X		X
Ruby-crowned Kinglet				X		X	X	X	X
Blue-Gray Gnatcatcher				X			X	X	
Eastern Bluebird	X	X				X		X	
Veery				X					
Gray-cheeked Thrush									X
Hermit Thrush				X			X	X	

(Continued)

Table 2—Birds occurring in eastern nonforest habitats (exclusive of Great Plains)—Continued

Bird Species	Field, glade, orchard	Pasture, wet or sedge meadows	Fresh marsh, pond	Wooded swamp, bog, shrub swamp	Lake, stream, river	Sand pine-scrub oak	Pocosins	Everglades, mangroves, tropical hardwoods	Alpine tundra, krummholtz
Wood Thrush				X			X		
American Robin	X	X		X		X	X	X	
Gray Catbird	X	X		X		X	X	X	
Northern Mockingbird	X	X				X	X	X	
Brown Thrasher	X	X				X	X	X	
Water Pipit	X	X			X				
Bohemian Waxwing	X								
Cedar Waxwing	X	X		X	X	X		X	
Northern Shrike	X	X							
Loggerhead Shrike	X	X				X		X	
White-eyed Vireo	X			X		X	X	X	
Solitary Vireo				X		X	X	X	
Yellow-throated Vireo				X	X		X	X	
Warbling Vireo	X	X	X	X	X				
Red-eyed Vireo	X	X		X			X		
Black-whiskered Vireo								X	
Bachman's Warbler							X		
Blue-winged Warbler	X	X							
Golden-winged Warbler	X	X							
Orange-crowned Warbler						X	X	X	
Nashville Warbler				X					
Northern Parula				X	X		X	X	
Yellow Warbler	X	X	X	X	X			X	
Chestnut-sided Warbler		X		X					
Magnolia Warbler									X
Cape May Warbler								X	X
Black-throated Blue Warbler								X	
Yellow-rumped Warbler				X		X	X	X	
Black-throated Green Warbler							X	X	
Yellow-throated Warbler						X	X	X	
Pine Warbler						X	X	X	
Prairie Warbler	X					X	X	X	
Palm Warbler		X		X		X	X	X	
Bay-breasted Warbler	X								
Blackpoll Warbler									X
Black-and-white Warbler				X		X	X	X	
American Redstart	X			X				X	
Prothonotary Warbler				X	X		X		
Worm-eating Warbler							X		
Swainson's Warbler							X		

(Continued)

Table 2—Birds occurring in eastern nonforest habitats (exclusive of Great Plains)—Continued

Bird Species	Field, glade, orchard	Pasture, wet or sedge meadows	Fresh marsh, pond	Wooded swamp, bog, shrub swamp	Lake, stream, river	Sand pine-scrub oak	Pocosins	Everglades, mangroves, tropical hardwoods	Alpine tundra, krummholtz
Ovenbird								X	
Northern Waterthrush				X			X	X	
Louisiana Waterthrush				X	X				
Kentucky Warbler				X	X				
Common Yellowthroat	X	X	X	X	X	X	X	X	
Hooded Warbler				X			X		
Wilson's Warbler				X					
Canada Warbler				X					
Yellow-breasted Chat	X	X	X	X		X	X	X	
Summer Tanager						X	X	X	
Northern Cardinal	X	X		X		X	X	X	
Rose-breasted Grosbeak	X								
Blue Grosbeak	X	X				X	X		
Indigo Bunting	X	X				X	X	X	
Painted Bunting						X	X	X	
Dickcissel	X							X	
Rufous-sided Towhee	X					X		X	
Bachman's Sparrow	X					X			
American Tree Sparrow	X	X	X						
Chipping Sparrow	X	X				X		X	
Field Sparrow	X					X			
Vesper Sparrow	X	X				X			
Lark Sparrow	X								
Savannah Sparrow	X	X	X			X	X	X	
Grasshopper Sparrow	X					X		X	
Henslow's Sparrow	X	X							
Le Conte's Sparrow	X	X	X						
Sharp-tailed Sparrow		X							
Fox Sparrow	X					X			
Song Sparrow	X	X	X				X	X	
Lincoln's Sparrow				X	X				
Swamp Sparrow		X	X	X			X	X	
White-throated Sparrow	X	X				X	X		
White-crowned Sparrow	X					X			
Dark-eyed Junco	X	X							X
Lapland Longspur	X	X							
Snow Bunting	X	X	X						
Bobolink	X	X							
Red-winged Blackbird	X	X	X	X	X		X	X	
Eastern Meadowlark	X					X		X	

(Continued)

Table 2 —Birds occurring in eastern nonforest habitats (exclusive of Great Plains)—Continued

Bird Species	Field, glade, orchard	Pasture, wet or sedge meadows	Fresh marsh, pond	Wooded swamp, bog, shrub swamp	Lake, stream, river	Sand pine-scrub oak	Pocosins	Everglades, mangroves, tropical hardwoods	Alpine tundra, krummholtz
Western Meadowlark	X								
Rusty Blackbird			X	X		X	X		
Brewer's Blackbird	X								
Boat-tailed Grackle								X	
Common Grackle	X	X	X	X	X	X	X	X	
Brown-headed Cowbird	X	X	X	X		X	X		
Orchard Oriole	X					X			
Northern Oriole	X	X		X	X			X	
Purple Finch	X						X		
House Finch	X								
Red Crossbill									X
Common Redpoll	X	X							
Pine Siskin	X	X					X		
American Goldfinch	X	X	X	X		X	X	X	
House Sparrow	X	X							

Table 3—Birds occurring in Great Plains habitats

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
Common Loon	X						X		
Pied-billed Grebe	X						X		
Horned Grebe	X						X		
Red-necked Grebe							X		
Eared Grebe	X						X		
Western Grebe							X		
American White Pelican	X						X		
Double-crested Cormorant	X						X		
Anhinga	X						X		
American Bittern	X						X		
Least Bittern	X						X		
Great Blue Heron	X						X		
Great Egret	X						X		
Snowy Egret	X						X		
Little Blue Heron	X						X		
Cattle Egret	X	X	X	X	X		X		
Green-backed Heron	X						X		
Black-crowned Night-Heron	X						X		
Yellow-crowned Night-Heron	X						X		
Black-bellied Whistling-Duck	X								
Tundra Swan	X						X		
Greater White-fronted Goose	X						X		
Snow Goose	X						X		
Ross' Goose	X						X		
Canada Goose	X	X	X	X	X	X	X		
Wood Duck	X	X					X		
Green-winged Teal	X	X	X	X	X	X	X		
American Black Duck	X						X		
Mottled Duck	X								
Mallard	X	X	X	X	X	X	X		
Northern Pintail	X	X	X	X	X	X	X		
Blue-winged Teal	X						X		
Cinnamon Teal	X				X	X	X		
Northern Shovler	X						X		
Gadwall	X						X		
American Wigeon	X						X		
Canvasback	X						X		
Redhead	X						X		
Ring-necked Duck	X						X		
Greater Scaup	X						X		

(Continued)

Table 3—Birds occurring in Great Plains habitats—continued

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
Lesser Scaup	X	X		X		X	X		
Common Goldeneye	X						X		
Bufflehead	X				X	X	X		
Hooded Merganser	X						X		
Common Merganser	X			X	X	X	X		
Red-breasted Merganser	X						X		
Ruddy Duck	X				X	X	X		
Black Vulture	X	X	X	X					
Turkey Vulture	X	X	X	X	X	X	X	X	X
Osprey							X		
Black-shouldered Kite	X								
Mississippi Kite	X	X	X	X			X		
Bald Eagle	X	X	X	X	X		X	X	X
Northern Harrier	X	X	X	X	X	X	X	X	X
Sharp-shinned Hawk	X	X	X	X	X	X	X	X	X
Cooper's Hawk	X	X	X	X	X	X	X	X	X
Northern Goshawk						X	X	X	X
Harris' Hawk	X	X	X						
Red-shouldered Hawk	X	X	X				X		
Broad-winged Hawk	X	X					X	X	X
Swainson's Hawk	X	X	X	X	X	X	X	X	X
White-tailed Hawk	X		X						
Zone-tailed Hawk			X						
Red-tailed Hawk	X	X	X	X	X	X	X	X	X
Ferruginous Hawk	X	X	X	X	X	X			X
Rough-legged Hawk	X	X	X	X	X	X	X	X	X
Golden Eagle	X	X		X	X	X	X	X	X
American Kestrel	X	X	X	X	X	X	X	X	X
Merlin	X	X	X			X	X	X	X
Peregrine Falcon	X		X						X
Prairie Falcon	X		X			X			X
Plain Chachalaca			X						
Gray Partridge					X	X		X	
Ring-necked Pheasant					X	X	X	X	
Sage Grouse						X	X		
Greater Prairie-Chicken	X			X	X	X			
Lesser Prairie-Chicken			X						
Sharp-tailed Grouse					X	X	X	X	
Wild Turkey		X	X				X	X	X
Northern Bobwhite		X	X	X	X		X	X	X

(Continued)

Table 3—Birds occurring in Great Plains habitats—continued

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
Scaled Quail			X	X	X				
Yellow Rail	X								
Black Rail	X						X		
Clapper Rail	X								
King Rail	X						X		
Virginia Rail	X						X		
Sora	X						X		
Purple Gallinule	X						X		
Common Moorehen	X						X		
American Coot	X			X	X	X	X		
Sandhill Crane	X						X		
Whooping Crane	X						X		
Black-bellied Plover	X						X		
Snowy Plover	X						X		
Piping Plover	X						X		
Killdeer	X		X	X	X	X	X		
Mountain Plover	X			X	X	X			
Black-necked Stilt	X						X		
American Avocet	X			X	X	X	X		
Greater Yellowlegs	X						X		
Lesser Yellowlegs	X						X		
Willet	X				X	X	X		
Spotted Sandpiper	X	X	X	X	X	X	X		
Upland Sandpiper				X	X	X	X		
Long-billed Curlew	X			X	X	X	X		
Marbled Godwit	X					X	X		
Ruddy Turnstone	X								
Red Knot	X								
Sanderling	X								
Western Sandpiper	X						X		
Least Sandpiper	X						X		
Short-billed Dowitcher	X						X		
Long-billed Dowitcher	X								
Common Snipe	X						X		
American Woodcock	X	X					X		
Wilson's Phalarope	X			X	X	X	X		
Franklin's Gull					X	X	X		
Bonaparte's Gull	X						X		
Ring-billed Gull	X				X	X	X		
California Gull						X	X		

(Continued)

Table 3—Birds occurring in Great Plains habitats—continued

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
Herring Gull	X						X		
Caspian Tern	X						X		
Common Tern							X		
Forster's Tern	X						X		
Least Tern				X	X				
Black Tern							X		
Rock Dove		X	X	X	X	X		X	X
White-winged Dove	X		X						
Mourning Dove		X	X	X	X	X	X	X	X
Inca Dove		X	X						
Common Ground-Dove		X	X	X					
Black-billed Cuckoo						X	X	X	X
Yellow-billed Cuckoo	X	X	X				X	X	
Greater Roadrunner		X	X	X	X				X
Groove-billed Ani	X	X	X						
Common Barn-Owl		X	X	X	X	X	X	X	X
Eastern Screech-Owl		X	X	X	X	X	X	X	X
Great Horned Owl		X	X	X	X	X	X	X	X
Snowy Owl						X	X	X	
Burrowing Owl			X	X	X	X			
Barred Owl		X					X	X	
Long-eared Owl							X	X	X
Short-eared Owl	X	X	X	X	X	X	X		
Northern Saw-whet Owl							X	X	X
Lesser Nighthawk			X						
Common Nighthawk	X	X	X	X	X	X	X	X	X
Common Pauraque	X		X						
Common Poorwill			X	X	X	X			X
Chuck will's-widow	X	X					X	X	
Whip-poor-will	X						X	X	
Chimney Swift	X	X	X	X	X	X	X	X	
Buff-bellied Hummingbird			X						
Ruby-throated Hummingbird	X	X	X	X	X	X	X	X	
Black-chinned Hummingbird		X	X	X					
Broad-tailed Hummingbird			X				X	X	
Belted Kingfisher	X	X	X				X		
Green Kingfisher			X						
Red-headed Woodpecker	X	X	X	X	X	X	X	X	X
Golden-fronted Woodpecker	X		X	X			X		
Red-bellied Woodpecker		X							

(Continued)

Table 3—Birds occurring in Great Plains habitats—continued

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
Yellow-bellied Sapsucker	X	X	X				X	X	
Ladder-backed Woodpecker			X	X			X	X	
Downy Woodpecker	X	X			X	X	X	X	X
Hairy Woodpecker	X	X			X	X	X	X	X
Red-cockaded Woodpecker		X							
Northern Flicker	X	X	X	X	X	X	X	X	X
Pileated Woodpecker							X		
Olive-sided Flycatcher							X		
Western Wood-Pewee			X	X			X	X	
Eastern Wood-Pewee		X	X				X	X	
Acadian Flycatcher	X	X	X				X		
Willow Flycatcher					X	X	X	X	X
Least Flycatcher							X	X	
Eastern Phoebe	X	X	X				X	X	
Say's Phoebe	X	X	X	X	X	X	X	X	X
Vermilion Flycatcher	X	X	X				X		
Ash-throated Flycatcher		X	X	X			X		
Great Crested Flycatcher	X	X	X	X	X	X	X	X	X
Brown-crested Flycatcher			X						
Couch's Kingbird			X						
Cassin's Kingbird			X	X	X		X	X	X
Western Kingbird	X	X	X	X	X	X	X	X	X
Eastern Kingbird	X	X	X	X	X	X	X	X	X
Scissor-tailed Flycatcher	X	X	X	X	X		X	X	
Horned Lark	X		X	X	X	X			
Purple Martin	X	X	X		X		X	X	
Tree Swallow	X				X		X	X	
Violet-green Swallow						X	X		
Northern Rough-winged Swallow	X		X	X	X	X	X		
Bank Swallow	X			X	X	X	X		
Cliff Swallow		X	X	X	X	X	X	X	
Barn Swallow	X	X	X	X	X	X	X	X	X
Blue Jay	X	X	X	X	X	X	X	X	X
Scrub Jay			X	X			X		
Black-billed Magpie				X	X	X	X	X	X
American Crow	X	X	X	X	X	X	X	X	X
Fish Crow	X								
Chihuahuan Raven			X	X					
Common Raven			X						X
Black-capped Chickadee					X	X	X	X	X

(Continued)

Table 3—Birds occurring in Great Plains habitats—continued

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
Carolina Chickadee	X	X					X	X	
Tufted Titmouse	X	X	X	X			X	X	
Verdin			X	X			X		
Bushtit			X	X			X		
Red-breasted Nuthatch		X					X	X	X
White-breasted Nuthatch		X					X	X	X
Brown-headed Nuthatch		X							
Brown Creeper	X	X	X				X	X	X
Cactus Wren			X						
Rock Wren			X	X	X	X	X		X
Canyon Wren			X	X					
Carolina Wren	X	X	X				X		
Bewick's Wren		X	X	X	X		X	X	
House Wren	X	X	X				X	X	X
Winter Wren	X	X					X		
Sedge Wren	X				X	X	X		
Marsh Wren	X		X		X	X	X		
Golden-crowned Kinglet		X	X				X	X	X
Ruby-crowned Kinglet	X	X	X				X	X	X
Blue-gray Gnatcatcher	X	X	X				X	X	
Black-tailed Gnatcatcher			X						
Eastern Bluebird	X	X	X		X		X	X	
Veery	X					X	X	X	
Swainson's Thrush	X		X						
Hermit Thrush	X	X	X				X	X	
Wood Thrush		X					X		
American Robin	X	X	X	X	X	X	X	X	X
Gray Catbird	X	X	X		X	X	X	X	X
Northern Mockingbird	X	X	X				X	X	X
Sage Thrasher			X						
Brown Thrasher	X	X		X	X	X	X	X	X
Long-billed Thrasher	X		X						
Curve-billed Thrasher			X	X					
Water Pipit	X	X	X	X			X		
Sprague's Pipit	X	X	X	X			X	X	
Cedar Waxwing	X	X	X	X	X	X	X	X	X
Bohemian Waxwing						X			
Northern Shrike						X	X	X	
Loggerhead Shrike	X	X	X	X	X	X	X	X	X
European Starling	X	X	X	X	X	X	X	X	X

(Continued)

Table 3—Birds occurring in Great Plains habitats—continued

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
White-eyed Vireo	X	X	X				X	X	
Bell's Vireo		X	X	X			X		X
Black-capped Vireo		X	X	X					
Solitary Vireo	X	X	X	X			X		
Yellow-throated Vireo	X	X	X				X	X	
Warbling Vireo	X	X	X				X	X	X
Red-eyed Vireo	X	X	X		X		X	X	X
Blue-winged Warbler					X		X	X	
Orange-crowned Warbler	X	X	X				X		X
Northern Parula	X	X	X				X		
Yellow Warbler		X	X	X			X	X	
Yellow-rumped Warbler	X	X	X	X	X	X	X	X	X
Golden-cheeked Warbler		X	X						
Yellow-throated Warbler	X	X	X				X		
Cerulean Warbler		X					X		
Black-and-white Warbler	X	X	X				X	X	X
American Redstart		X			X	X	X	X	
Prothonotary Warbler	X	X					X		
Worm-eating Warbler		X					X		
Swainson's Warbler		X					X		
Ovenbird	X						X		X
Northern Waterthrush							X		
Louisiana Waterthrush	X	X					X		
Kentucky Warbler		X					X	X	
Common Yellowthroat	X	X	X	X	X	X	X	X	X
Hooded Warbler		X					X		
Wilson's Warbler	X					X			
Yellow-breasted Chat	X	X	X	X		X	X	X	
Summer Tanager	X	X	X				X	X	
Scarlet Tanager							X	X	
Northern Cardinal	X	X	X		X		X	X	
Pyrrhuloxia			X						
Rose-breasted Grosbeak	X						X	X	
Black-headed Grosbeak							X	X	X
Blue Grosbeak		X	X	X	X		X	X	X
Lazuli Bunting				X	X	X	X	X	X
Indigo Bunting	X	X	X	X	X		X	X	X
Painted Bunting	X	X	X	X					
Dickcissel	X	X	X	X	X	X			
Olive Sparrow			X						

(Continued)

Table 3—Birds occurring in Great Plains habitats—continued

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
Green-tailed Towhee			X	X	X			X	
Rufous-sided Towhee	X	X	X	X	X	X	X	X	X
Brown Towhee			X	X					
Bachman's Sparrow		X							
Cassin's Sparrow	X		X	X	X				
Rufous-crowned Sparrow		X	X	X					
American Tree Sparrow					X	X	X	X	X
Chipping Sparrow	X	X	X	X	X	X	X	X	X
Clay-colored Sparrow	X		X			X	X	X	
Brewer's Sparrow		X	X	X	X	X			
Field Sparrow	X	X	X	X	X	X	X	X	X
Vesper Sparrow	X	X	X	X	X	X			X
Lark Sparrow	X	X	X	X	X	X	X	X	X
Black-throated Sparrow			X	X					
Lark Bunting		X	X	X	X	X	X	X	X
Savannah Sparrow	X	X	X	X	X	X	X		
Baird's Sparrow			X			X			
Grasshopper Sparrow		X	X	X	X	X			X
Henslow's Sparrow	X	X			X				X
Le Conte's Sparrow	X	X	X			X	X	X	
Sharp-tailed Sparrow	X						X		
Seaside Sparrow	X								
Fox Sparrow	X	X	X	X		X	X	X	
Song Sparrow	X	X	X	X	X	X	X	X	X
Lincoln's Sparrow		X	X			X	X		
Swamp Sparrow	X	X	X	X			X	X	
White-throated Sparrow	X	X	X	X	X	X	X	X	X
White-crowned Sparrow	X	X	X	X		X	X	X	X
Harris' Sparrow		X	X	X	X	X	X		X
Dark-eyed Junco	X	X		X	X	X	X	X	X
McCown's Longspur	X			X		X			
Lapland Longspur				X	X	X			
Smith's Longspur		X			X				
Chestnut-collared Longspur				X	X	X			
Snow Bunting					X	X			
Bobolink					X	X	X		
Red-winged Blackbird	X	X	X	X	X	X	X	X	
Eastern Meadowlark	X	X	X	X	X	X	X		
Western Meadowlark	X	X	X	X	X	X	X	X	X
Yellow-headed Blackbird	X				X	X	X		X

(Continued)

Table 3—Birds occurring in Great Plains habitats—continued

Bird Species	Gulf prairies and marshes	East Texas prairies, cross timbers, pineywoods, and post oak savannah	South Texas shrub grassland	Southern plains	Central plains	Northern plains	Wetland and riparian habitats	Shelterbelts and woodlots	Pine-oak, brushy woodland, badlands/juniper
Rusty Blackbird	X	X	X				X		
Brewer's Blackbird	X	X	X	X	X	X	X		X
Great-tailed Grackle	X	X	X	X			X		
Boat-tailed Grackle	X								
Common Grackle	X	X	X	X	X	X	X	X	X
Brown-headed Cowbird	X	X	X	X	X	X	X	X	X
Orchard Oriole	X	X	X				X	X	
Northern Oriole	X	X	X	X	X	X	X	X	X
Purple Finch	X	X	X						
House Finch		X	X	X	X		X	X	X
Red Crossbill							X	X	
Common Redpoll						X			
Pine Siskin	X	X	X	X	X	X	X	X	
Lesser Goldfinch			X	X					
American Goldfinch	X	X	X	X	X	X	X	X	X
Evening Grosbeak					X	X	X	X	X
House Sparrow	X	X	X	X	X	X	X	X	X

Table 4—Birds occurring in western forest types

Bird Species	Douglas-fir	Hemlock-Sitka spruce	Redwood	Ponderosa pine	Larch/white pine	Lodgepole pine	Fir-spruce	Aspen/hardwoods	Chaparral	Pinyon-juniper
Wood Duck		X	X	X	X		X	X		
Harlequin Duck		X			X					
Common Goldeneye	X	X			X					
Barrow's Goldeneye	X	X			X					
Bufflehead	X	X	X	X	X			X		
Hooded Merganser	X	X			X					
Common Merganser	X	X	X	X			X	X		
Turkey Vulture	X	X	X	X	X	X	X	X	X	X
Osprey	X	X	X	X	X	X	X	X	X	X
Black-shouldered Kite	X			X				X		
Bald Eagle	X	X	X	X	X	X	X	X	X	X
Sharp-shinned Hawk	X	X	X	X	X	X	X	X	X	X
Cooper's Hawk	X	X	X	X	X	X	X	X	X	X
Northern Goshawk	X	X	X	X	X	X	X	X		X
Red-shouldered Hawk	X			X				X		
Swainson's Hawk				X				X	X	X
Red-tailed Hawk	X	X	X	X	X	X	X	X	X	X
Rough-legged Hawk				X				X	X	X
Golden Eagle	X	X	X	X	X	X	X	X	X	X
American Kestrel	X	X	X	X	X	X	X	X	X	X
Merlin	X	X	X	X	X	X	X	X	X	X
Peregrine Falcon	X	X	X	X	X	X	X	X	X	X
Prairie Falcon				X				X	X	X
Chukar				X				X	X	X
Spruce Grouse		X			X		X			
Blue Grouse	X	X	X	X	X	X	X	X		
Ruffed Grouse	X	X		X	X	X		X		
Wild Turkey	X			X	X	X	X	X	X	X
California Quail	X	X	X	X			X	X	X	X
Mountain Quail	X	X	X	X		X	X	X	X	X
Marbled Murrelet	X	X								
Band-tailed Pigeon	X	X	X	X		X	X	X	X	X
Mourning Dove	X	X	X	X		X	X	X	X	X
Common Barn-Owl	X	X	X	X	X		X	X	X	X
Flammulated Owl	X			X	X	X	X	X		
Western Screech-Owl	X	X	X	X		X		X	X	X
Great Horned Owl	X	X	X	X	X	X	X	X	X	X
Northern Pygmy-Owl	X	X	X	X	X	X	X	X	X	X
Spotted Owl	X	X	X	X	X	X	X	X		X
Barred Owl	X	X		X	X		X	X		

(Continued)

Table 4—Birds occurring in western forest types—continued

Bird Species	Douglas-fir	Hemlock-Sitka spruce	Redwood	Ponderosa pine	Larch/white pine	Lodgepole pine	Fir-spruce	Aspen/hardwoods	Chaparral	Pinyon-juniper
Great Gray Owl	X				X	X	X	X		
Long-eared Owl	X	X	X	X	X	X	X	X	X	X
Short-eared Owl				X				X	X	X
Boreal Owl	X					X	X	X		
Northern Saw-whet Owl	X	X	X	X	X	X	X	X	X	X
Common Nighthawk	X	X		X			X	X	X	X
Common Poorwill	X			X			X	X	X	X
Whip-poor-will				X						
Black Swift	X	X					X	X		
Vaux's Swift	X	X	X	X	X	X	X	X		
White-throated Swift	X	X	X	X	X	X	X	X		X
Black-chinned Hummingbird	X	X	X	X	X		X	X	X	
Anna's Hummingbird	X	X	X	X			X	X	X	
Calliope Hummingbird	X			X	X	X	X	X		
Broad-tailed Hummingbird	X		X	X	X	X	X	X	X	
Rufous Hummingbird	X	X	X	X	X	X	X	X	X	X
Allen's Hummingbird	X	X	X	X		X	X	X	X	
Belted Kingfisher	X		X	X	X			X		X
Lewis' Woodpecker	X		X	X	X		X	X		
Acorn Woodpecker	X		X	X			X	X		
Yellow-bellied Sapsucker	X	X	X		X	X	X	X	X	
Red-breasted Sapsucker	X	X	X	X				X		
Williamson's Sapsucker	X		X	X	X	X	X	X		
Ladder-backed Woodpecker									X	X
Nuttall's Woodpecker	X		X	X				X	X	X
Downy Woodpecker	X	X	X	X	X	X	X	X		X
Hairy Woodpecker	X	X	X	X	X	X	X	X		X
White-headed Woodpecker	X	X	X	X	X	X	X			
Three-toed Woodpecker	X	X		X	X	X	X			
Black-backed Woodpecker	X	X	X	X	X	X	X	X		
Northern Flicker	X	X	X	X	X	X	X	X	X	X
Pileated Woodpecker	X	X	X	X	X	X	X	X		
Olive-sided Flycatcher	X	X	X	X	X	X	X	X		
Western Wood-Pewee	X	X	X	X	X	X	X	X	X	X
Willow Flycatcher	X	X		X	X			X		X
Hammond's Flycatcher	X	X	X	X	X	X	X	X		
Dusky Flycatcher	X			X	X	X	X	X	X	X
Gray Flycatcher				X					X	X
Western Flycatcher	X	X	X	X	X	X	X	X		X
Black Phoebe				X				X	X	

(Continued)

Table 4—Birds occurring in western forest types—continued

Bird Species	Douglas-fir	Hemlock-Sitka spruce	Redwood	Ponderosa pine	Larch/white pine	Lodgepole pine	Fir-spruce	Aspen/hardwoods	Chaparral	Pinyon-juniper
Say's Phoebe				X				X	X	X
Ash-throated Flycatcher				X				X	X	X
Brown-crested Flycatcher				X					X	X
Cassin's Kingbird				X					X	X
Western Kingbird				X					X	X
Purple Martin	X	X	X	X		X	X	X		
Tree Swallow	X	X	X	X	X	X	X	X	X	X
Violet-green Swallow	X	X	X	X	X	X	X	X	X	X
Northern Rough-winged Swallow	X						X	X	X	X
Cliff Swallow	X	X	X	X			X	X	X	X
Barn Swallow	X	X	X	X			X	X	X	X
Gray Jay	X	X	X	X	X	X	X	X		
Steller's Jay	X	X	X	X	X	X	X	X		X
Scrub Jay	X		X	X				X	X	X
Pinyon Jay	X		X	X		X	X	X	X	X
Clark's Nutcracker	X		X	X	X	X	X	X		X
Black-billed Magpie	X			X	X	X	X	X		X
Yellow-billed Magpie								X		
American Crow	X			X		X	X	X	X	X
Common Raven	X	X	X	X	X	X	X	X	X	X
Black-capped Chickadee	X	X	X	X		X	X	X		X
Mountain Chickadee	X	X	X	X	X	X	X	X		X
Chestnut-backed Chickadee	X	X	X		X		X	X		
Plain Titmouse	X		X	X				X	X	X
Bushtit	X		X	X				X	X	X
Red-breasted Nuthatch	X	X	X	X	X	X	X	X		
White-breasted Nuthatch	X	X	X	X	X	X	X	X		
Pygmy Nuthatch	X			X	X	X	X	X		
Brown Creeper	X	X	X	X	X	X	X	X		X
Rock Wren	X			X	X	X	X	X	X	X
Canyon Wren	X			X		X	X	X	X	X
Bewick's Wren	X		X	X			X	X	X	X
House Wren	X	X	X	X	X	X	X	X	X	X
Winter Wren	X	X	X	X	X	X	X	X		
American Dipper	X		X	X	X	X	X	X		
Golden-crowned Kinglet	X	X	X	X	X	X	X	X	X	
Ruby-crowned Kinglet	X	X	X	X	X	X	X	X	X	X
Blue-gray Gnatcatcher	X		X	X				X	X	X
Western Bluebird	X		X	X	X	X	X	X	X	X
Mountain Bluebird	X			X	X	X	X	X	X	X

(Continued)

Table 4—Birds occurring in western forest types—continued

Bird Species	Douglas-fir	Hemlock-Sitka spruce	Redwood	Ponderose pine	Larch/white pine	Lodgepole pine	Fir-spruce	Aspen/hardwoods	Chaparral	Pinyon-juniper
Townsend's Solitaire	X	X	X	X	X	X	X	X	X	X
Swainson's Thrush	X	X	X	X	X	X	X	X	X	X
Hermit Thrush	X	X	X	X	X	X	X	X	X	X
American Robin	X	X	X	X	X	X	X	X	X	X
Varied Thrush	X	X	X	X	X	X	X	X		
Wrentit	X		X	X				X	X	
Gray Catbird				X				X		X
Northern Mockingbird			X	X				X	X	X
Curve-billed Thrasher									X	X
California Thrasher									X	
Bohemian Waxwing	X	X	X	X		X	X	X		X
Cedar Waxwing	X	X	X	X			X	X	X	X
Phainopepla									X	X
Northern Shrike	X			X				X		X
Loggerhead Shrike	X			X				X	X	X
European Starling				X				X	X	X
Solitary Vireo	X	X	X	X	X	X	X	X	X	X
Hutton's Vireo	X	X	X	X			X	X	X	
Warbling Vireo	X	X	X	X		X	X	X	X	
Red-eyed Vireo	X			X				X		
Orange-crowned Warbler	X	X	X	X		X	X	X	X	X
Nashville Warbler	X	X	X		X		X	X		
Virginia's Warbler				X					X	X
Yellow Warbler	X	X	X	X	X	X	X	X	X	X
Yellow-rumped Warbler	X	X	X	X	X	X	X	X	X	X
Black-throated Gray Warbler				X	X			X	X	X
Townsend's Warbler	X	X	X	X	X	X	X	X		
Hermit Warbler	X	X	X	X		X	X	X		
Grace's Warbler	X			X						
Northern Waterthrush					X			X		
MacGillivray's Warbler	X	X	X	X	X	X	X	X	X	
Common Yellowthroat	X	X	X	X	X	X	X	X		
Wilson's Warbler	X	X	X	X	X	X	X	X		
Red-faced Warbler				X			X	X		
Painted Redstart				X				X		X
Yellow-breasted Chat				X	X			X	X	
Hepatic Tanager				X				X		
Summer Tanager				X				X		
Western Tanager	X	X	X	X	X	X	X	X	X	X
Black-headed Grosbeak	X	X	X	X	X		X	X	X	X

(Continued)

Table 4—Birds occurring in western forest types—continued

Bird Species	Douglas-fir	Hemlock-Sitka spruce	Redwood	Ponderose pine	Larch/white pine	Lodgepole pine	Fir-spruce	Aspen/hardwoods	Chaparral	Pinyon-juniper
Lazuli Bunting	X		X	X			X	X	X	X
Indigo Bunting				X						X
Green-tailed Towhee				X				X	X	X
Rufous-sided Towhee	X	X	X	X	X	X	X	X	X	X
Rufous-crowned Sparrow				X				X	X	
American Tree Sparrow	X			X						
Chipping Sparrow	X	X	X	X	X	X	X	X	X	X
Fox Sparrow	X	X	X				X	X	X	X
Song Sparrow	X	X	X	X			X	X	X	X
Lincoln's Sparrow	X	X	X			X	X	X		
Golden-crowned Sparrow	X	X	X				X	X	X	X
White-crowned Sparrow	X	X	X	X		X	X	X	X	X
Harris' Sparrow				X				X	X	
Dark-eyed Junco	X	X	X	X	X	X	X	X	X	X
Brewer's Blackbird	X			X			X	X	X	X
Northern Oriole	X	X	X	X	X		X	X	X	X
Scott's Oriole										X
Rosy Finch	X			X		X	X			
Pine Grosbeak	X	X		X	X	X	X	X		
Purple Finch	X	X	X		X			X		
Cassin's Finch	X	X	X	X	X	X	X	X		
House Finch	X	X	X	X	X	X	X	X	X	X
Red Crossbill	X	X	X	X	X	X	X			
White-winged Crossbill	X	X			X	X	X			
Common Redpoll								X		
Pine Siskin	X	X	X	X	X	X	X	X	X	X
Lesser Goldfinch			X	X				X	X	X
Lawrence's Goldfinch								X	X	
American Goldfinch	X	X	X	X				X	X	X
Evening Grosbeak	X	X	X	X	X	X	X	X	X	X

Table 5—Birds occurring in southwestern and western nonforest habitats

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
Pied-billed Grebe					X		X		
Horned Grebe					X		X		
Eared Grebe					X		X		
Western Grebe					X		X		
Double-crested Cormorant					X		X		
American Bittern					X		X		
Least Bittern					X				
Great Blue Heron					X	X	X	X	
Great Egret					X		X		
Snowy Egret					X		X		
Cattle Egret					X	X			
Green-backed Heron					X		X		
Black-crowned Night-Heron					X		X	X	
White-faced Ibis					X	X	X		
Black-bellied Whistling-Duck					X				
Tundra Swan					X	X	X	X	
Trumpter Swan							X	X	
Greater White-fronted Goose						X	X		
Snow Goose					X	X	X		
Ross' Goose						X	X		
Canada Goose					X	X	X	X	
Wood Duck					X		X		
Green-winged Teal					X	X	X	X	
Mallard					X	X	X	X	
Northern Pintail					X	X	X	X	
Blue-winged Teal					X	X	X	X	
Cinnamon Teal					X	X	X	X	
Northern Shoveler					X	X	X	X	
Gadwall					X	X	X	X	
American Wigeon					X	X	X	X	
Canvasback					X		X		
Redhead					X		X		
Ring-necked Duck					X		X		
Greater Scaup							X		
Lesser Scaup					X	X	X		
Harlequin Duck							X		
Common Goldeneye					X		X		
Barrow's Goldeneye							X		
Bufflehead					X		X		
Hooded Merganser							X		

(Continued)

Table 5—Birds occurring in southwestern and western nonforest habitats—continued

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
Common Merganser					X		X	X	
Red-breasted Merganser							X		
Ruddy Duck					X		X	X	
Black Vulture		X	X						
Turkey Vulture	X	X	X	X	X	X	X	X	
California Condor						X		X	
Osprey					X		X		
Black-shouldered Kite						X	X	X	
Bald Eagle	X				X	X	X	X	
Northern Harrier	X				X	X	X	X	
Sharp-shinned Hawk	X	X			X		X	X	
Cooper's Hawk	X						X	X	X
Northern Goshawk	X						X	X	
Common Black-Hawk					X				
Harris' Hawk		X	X		X				
Gray Hawk					X				
Red-shouldered Hawk						X	X		
Swainson's Hawk	X	X	X	X		X	X	X	
Zone-tailed Hawk					X		X		
Red-tailed Hawk	X	X	X	X	X	X	X	X	
Ferruginous Hawk	X	X	X	X					
Rough-legged Hawk	X	X	X	X		X		X	
Golden Eagle	X	X	X	X	X	X	X	X	
American Kestrel	X	X	X	X	X	X	X	X	X
Merlin	X	X	X	X	X	X	X		
Peregrine Falcon	X	X	X	X	X	X	X		X
Prairie Falcon	X	X	X	X	X	X	X	X	
Gray Partridge	X					X			
Chukar	X								
Ring-necked Pheasant	X					X	X		
Blue Grouse							X	X	
White-tailed Ptarmigan								X	
Ruffed Grouse							X		
Sage Grouse	X						X	X	
Sharp-tailed Grouse	X					X		X	
Wild Turkey	X	X			X		X		X
Montezuma Quail		X			X				X
Northern Bobwhite		X				X	X		
Scaled Quail		X	X			X			
Gambel's Quail	X	X	X	X	X				X

(Continued)

Table 5—Birds occurring in southwestern and western nonforest habitats—continued

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
California Quail	X				X	X			
Mountain Quail	X						X	X	
Clapper Rail					X				
Virginia Rail					X		X	X	
Sora					X		X	X	
Common Moorhen					X				
American Coot					X	X	X	X	
Sandhill Crane					X	X	X		
Whooping Crane					X				
Killdeer	X	X	X	X	X	X	X	X	
Mountain Plover						X		X	
Black-necked Stilt					X		X		
American Avocet					X	X	X	X	
Greater Yellowlegs					X		X		
Willet					X		X		
Spotted Sandpiper					X	X	X	X	
Upland Sandpiper						X		X	
Long-billed Curlew					X	X	X	X	
Marbled Godwit						X	X	X	
Least Sandpiper					X	X	X		
Long-billed Dowitcher					X		X		
Common Snipe					X	X	X	X	
Wilson's Phalarope					X		X		
Franklin's Gull					X	X	X	X	
Ring-billed Gull					X	X	X		
California Gull					X	X	X		
Herring Gull					X		X		
Caspian Tern							X		
Forster's Tern					X	X	X	X	
Black Tern					X	X	X	X	
Rock Dove					X	X	X	X	
Band-tailed Pigeon	X	X			X	X	X		
White-winged Dove		X	X	X	X				
Mourning Dove	X	X	X	X	X	X	X	X	X
Inca Dove		X	X						
Common Ground-Dove		X	X		X				
Black-billed Cuckoo							X		
Yellow-billed Cuckoo	X	X	X	X	X		X		
Greater Roadrunner		X	X	X	X	X			
Common Barn-owl	X	X	X	X	X	X	X		

(Continued)

Table 5—Birds occurring in southwestern and western nonforest habitats—continued

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
Flamulated Owl	X				X		X		
Eastern Screech-Owl			X				X		
Western Screech-Owl	X	X	X	X	X	X	X		
Whiskered Screech-Owl		X			X				
Great Horned Owl	X	X	X	X	X	X	X	X	
Northern Pygmy-Owl	X				X		X	X	
Ferruginous Pygmy-Owl		X			X				
Elf Owl		X	X		X				
Burrowing Owl	X		X	X		X		X	
Spotted Owl	X				X		X		
Great Gray Owl							X		
Long-eared Owl	X	X	X	X	X	X	X	X	
Short-eared Owl	X	X	X	X	X	X	X	X	
Northern Saw-whet Owl	X	X	X	X	X		X	X	
Lesser Nighthawk		X	X	X		X			
Common Nighthawk	X	X	X	X	X	X	X	X	
Common Poorwill	X	X	X	X	X	X	X		
Whip-poor-will		X			X				
Black Swift				X			X	X	
Vaux's Swift							X	X	
White-throated Swift	X	X	X	X	X		X	X	
Broad-billed Hummingbird		X	X		X				
Violet-crowned Hummingbird		X							
Blue-throated Hummingbird		X	X		X				
Magnificent Hummingbird		X			X				
Black-chinned Hummingbird	X	X		X	X		X	X	X
Anna's Hummingbird							X		
Costa's Hummingbird		X		X					
Calliope Hummingbird	X						X	X	
Broad-tailed Hummingbird	X	X					X	X	
Rufous Hummingbird	X	X					X	X	X
Allen's Hummingbird		X					X	X	
Elegant Trogon					X		X		
Belted Kingfisher					X		X		
Lewis' Woodpecker							X		
Acorn Woodpecker		X			X		X		
Gila Woodpecker		X			X				
Red-naped Sapsucker					X				
Yellow-bellied Sapsucker					X		X		
Red-breasted Sapsucker							X		

(Continued)

Table 5—Birds occurring in southwestern and western nonforest habitats—continued

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
Williamson's Sapsucker	X				X		X		
Ladder-backed Woodpecker		X	X	X	X		X		
Nuttall's Woodpecker							X		
Downy Woodpecker					X		X		
Hairy Woodpecker					X		X		
Strickland's Woodpecker		X			X				
Northern Flicker	X	X	X	X	X		X	X	
Pileated Woodpecker							X		
Northern Beardless-Tyrannulet		X			X				
Olive-sided Flycatcher							X		X
Greater Pewee		X			X				
Western Wood-Pewee					X		X		
Willow Flycatcher	X				X		X	X	
Hammond's Flycatcher							X		X
Dusky Flycatcher	X						X	X	
Gray Flycatcher	X								
Western Flycatcher							X	X	
Buff-breasted Flycatcher		X			X				
Black Phoebe		X	X	X	X	X			
Say's Phoebe	X	X	X	X		X	X		
Vermilion Flycatcher		X	X		X				
Dusky-capped Flycatcher		X			X				
Ash-throated Flycatcher		X	X	X	X		X		X
Brown-crested Flycatcher		X			X		X		
Sulphur-bellied Flycatcher		X			X				
Cassin's Kingbird	X	X	X	X	X	X			
Thick-billed Kingbird		X	X		X				
Western Kingbird	X	X	X	X	X	X	X		
Eastern Kingbird	X		X			X	X		
Rose-throated Becard		X			X				
Horned Lark	X	X	X	X		X	X	X	
Purple Martin		X			X	X	X	X	
Tree Swallow					X	X	X	X	
Violet-green Swallow	X				X	X	X	X	
Northern Rough-winged Swallow	X				X	X	X		
Bank Swallow	X	X			X	X	X		
Cliff Swallow					X	X	X	X	X
Barn Swallow	X	X	X	X	X	X	X		X
Gray Jay							X		
Steller's Jay							X		X

(Continued)

Table 5—Birds occurring in southwestern and western nonforest habitats—continued

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
Scrub Jay	X	X		X		X	X		X
Gray-breasted Jay			X		X				
Pinyon Jay	X	X	X	X			X		
Clark's Nutcracker							X	X	X
Black-billed Magpie	X				X	X	X	X	
Yellow-billed Magpie						X	X		
American Crow	X	X	X	X	X	X	X	X	
Chihuahuan Raven		X	X			X			
Common Raven	X	X	X	X	X	X	X	X	X
Black-capped Chickadee	X						X	X	
Mountain Chickadee	X						X	X	
Chestnut-backed Chickadee							X		
Bridled Titmouse		X			X		X		
Plain Titmouse	X	X	X		X		X		
Verdin		X	X	X					
Bushtit	X	X			X		X		
Red-breasted Nuthatch							X		
White-breasted Nuthatch					X		X		
Pygmy Nuthatch					X		X		
Brown Creeper					X		X		
Cactus Wren		X	X	X					
Rock Wren	X	X	X	X					
Canyon Wren	X	X		X			X		
Bewick's Wren		X	X	X		X	X		X
House Wren	X	X	X		X	X	X	X	
Winter Wren					X		X		
Marsh Wren	X				X		X	X	
American Dipper							X	X	
Golden-crowned Kinglet							X		
Ruby-crowned Kinglet					X		X		
Blue-gray Gnatcatcher	X	X	X		X		X		
Black-tailed Gnatcatcher		X	X		X				
Western Bluebird	X				X	X	X	X	
Mountain Bluebird	X	X	X	X		X	X	X	
Townsend's Solitaire	X				X		X	X	
Veery							X		
Swainson's Thrush					X		X		
Hermit Thrush	X					X	X	X	
American Robin	X	X	X	X	X	X	X	X	
Varied Thrush							X	X	

(Continued)

Table 5—Birds occurring in southwestern and western nonforest habitats—continued

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
Wrentit							X		
Gray Catbird							X		
Northern Mockingbird	X	X	X	X	X	X	X		
Sage Thrasher	X	X		X		X	X		
Bendire's Thrasher		X	X		X	X			
Curve-billed Thrasher		X	X		X				
California Thrasher							X		
Crissal Thrasher					X				
Le Conte's Thrasher	X			X					
Water Pipit	X					X	X	X	
Bohemian Waxwing	X						X		
Cedar Waxwing	X	X	X	X	X	X	X		
Phainopepla		X	X		X				
Northern Shrike	X					X	X	X	
Loggerhead Shrike	X	X	X	X	X	X	X	X	
European Starling	X	X	X	X	X	X	X	X	X
Bell's Vireo				X	X	X			
Gray Vireo	X								
Solitary Vireo	X				X		X		X
Hutton's Vireo		X			X		X		
Warbling Vireo					X		X		
Orange-crowned Warbler	X				X		X		
Nashville Warbler							X		
Virginia's Warbler	X				X		X		
Lucy's Warbler		X	X	X	X		X		
Yellow Warbler	X				X		X	X	
Yellow-rumped Warbler	X				X		X		
Black-throated Gray Warbler	X	X		X	X		X		X
Townsend's Warbler							X		
Hermit Warbler							X		
Grace's Warbler							X		
Ovenbird							X		
MacGillivray's Warbler	X						X	X	
Common Yellowthroat					X		X	X	
Wilson's Warbler					X		X	X	
Red-faced Warbler					X		X		
Painted Redstart					X		X		
Yellow-breasted Chat	X				X		X		
Olive Warbler							X		
Hepatic Tanager							X		

(Continued)

Table 5—Birds occurring in southwestern and western nonforest habitats—continued

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
Summer Tanager					X		X		
Western Tanager	X				X		X		
Northern Cardinal		X	X		X				
Pyrrhuloxia		X	X		X				
Rose-breasted Grosbeak							X		
Black-headed Grosbeak	X				X		X		X
Blue Grosbeak					X	X	X		
Lazuli Bunting	X	X			X	X	X	X	
Indigo Bunting					X		X		
Varied Bunting		X	X		X				
Green-tailed Towhee	X	X			X		X		
Rufous-sided Towhee	X	X			X		X		X
Brown Towhee		X	X	X	X	X	X		
Abert's Towhee		X	X		X				
Botteri's Sparrow		X							
Cassin's Sparrow		X	X			X			
Rufous-winged Sparrow		X							
Rufous-crowned Sparrow	X	X	X				X		
American Tree Sparrow	X						X		
Chipping Sparrow	X	X	X	X	X	X	X	X	
Clay-colored Sparrow		X	X			X			
Brewer's Sparrow	X	X	X	X	X	X			
Black-chinned Sparrow	X	X	X						X
Vesper Sparrow	X	X	X	X	X	X	X	X	
Lark Sparrow	X	X				X	X		
Black-throated Sparrow	X	X	X	X	X				
Sage Sparrow	X	X	X	X			X		
Lark Bunting						X			
Savannah Sparrow	X	X	X		X	X	X	X	
Grasshopper Sparrow		X	X	X	X	X	X		
Fox Sparrow	X				X		X		
Song Sparrow	X	X	X	X	X	X	X	X	
Lincoln's Sparrow					X		X	X	
Swamp Sparrow							X	X	
White-throated Sparrow			X		X		X		
Golden-crowned Sparrow						X	X	X	
White-crowned Sparrow	X	X	X	X	X	X	X	X	
Harris' Sparrow	X						X		
Dark-eyed Junco	X	X	X	X	X	X	X	X	
Yellow-eyed Junco		X			X				

(Continued)

Table 5—Birds occurring in southwestern and western nonforest habitats—continued

Bird Species	Great Basin shrubsteppe	Sonoran Desert scrub	Chihuahuan Desert scrub	Mojave Desert scrub	Desert riparian deciduous woodlands, marshes	Annual grasslands, farms	River, riparian woodlands, subalpine marshes	Mountain and alpine meadows	Relict conifer forests, madrean evergreen woodlands
McCown's Longspur		X	X			X		X	
Lapland Longspur	X					X		X	
Chestnut-collared Longspur		X	X			X	X		
Bobolink							X		
Red-winged Blackbird					X	X	X	X	
Tricolored Blackbird						X	X		
Eastern Meadowlark		X	X						
Western Meadowlark	X	X	X	X	X	X	X	X	
Yellow-headed Blackbird					X		X		
Rusty Blackbird							X		
Brewer's Blackbird					X	X	X	X	
Great-tailed Grackle		X	X		X	X			
Common Grackle							X		
Bronzed Cowbird		X			X				
Brown-headed Cowbird	X	X	X	X	X	X	X	X	
Hooded Oriole		X			X				
Northern Oriole					X	X	X		
Scott's Oriole		X	X	X					X
Rosy Finch	X					X		X	
Pine Grosbeak	X						X	X	
Purple Finch	X	X			X		X	X	
Cassin's Finch	X						X	X	
House Finch	X	X			X	X	X	X	
Red Crossbill	X						X		
Common Redpoll	X						X		
Pine Siskin	X					X	X	X	
Lesser Goldfinch	X	X	X	X	X	X			
Lawrence's Goldfinch		X		X		X			
American Goldfinch	X				X	X	X	X	
Evening Grosbeak	X				X		X		
House Sparrow	X	X	X	X	X	X	X	X	

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Family Fringillidae

Rosy Finch *Leucosticte arctoa* 515
Pine Grosbeak *Pinicola enucleator* 516
Purple Finch *Carpodacus purpureus* 517
Cassin's Finch *Carpodacus cassinii* 518
House Finch *Carpodacus mexicanus* 519

Red Crossbill *Loxia curvirostra* . . . 520
White-winged Crossbill *Loxia leucoptera* . . . 521
Common Redpoll *Carduelis flammea* . . . 522
Hoary Redpoll *Carduelis hornemanni* . . . 523
Pine Siskin *Carduelis pinus* . . . 524
Lesser Goldfinch *Carduelis psaltria* . . . 525
Lawrence's Goldfinch *Carduelis lawrencei* . . . 526
American Goldfinch *Carduelis tristis* . . . 527
Evening Grosbeak *Coccothraustes vespertinus* . . . 528

Family Passeridae

House Sparrow *Passer domesticus* . . . 529
Eurasian Tree Sparrow *Passer montanus* . . . 530